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Equity Redemption

Issues and Alternatives for Farmer Cooperatives



ABSTRACT

Equity Redemption: Issues and Alternatives for Farmer Cooperatives, David W. Cobia, North Dakota State University; Jeffrey S. Royer, Roger A. Wissman, Dennis Paul Smith, Donald R. Davidson, Stephen D. Lurya, J. Warren Mather, Phillip F. Brown, Agricultural Cooperative Service, U.S. Department of Agriculture; and Kenneth P. Krueger, Spokane Bank for Cooperatives, ACS Research Report No. 23. October 1982.

Cooperatives are under increasing pressure to redeem the equities of former and overinvested patrons. This report discusses the issues concerning equity redemption and describes alternative equity redemption plans and methods that can be used to improve or facilitate redemption. Trade-offs between cash patronage refunds, redemption, and growth are examined, and methods for distributing cash benefits to patrons are compared. Legal and tax aspects and board responsibilities are reviewed, and the influences of federated cooperatives and lending institutions are considered. The impact of proposed mandatory redemption programs is evaluated, and procedures for adopting a voluntary redemption program are detailed.

Key words: Cooperatives, Finance, Equity redemption, Law, Tax.

FOREWORD

Key issues facing cooperatives in the 1980's are capital formation and equity redemption. Cooperatives must be adequately capitalized to compete in a growing food and fiber industry. And, this must be capitalization in proportion to use, to maintain ownership and control by active patrons. Over the years, various methods have been used to sustain this ownership capital. Some have worked better than others for particular types of cooperatives.

Invariably, cooperatives face the challenge of maintaining member ownership capital at levels that will support sound financial operations. Unlike publicly traded corporate stocks, cooperatives are financed mainly by their members as owner-users. Control follows ownership. Ownership capital primarily comes from upfront contributions, and through per-unit capital retains or retained earnings. This report focuses on methods by which it is ultimately returned to patrons.

In recent years, equity redemption—the payback of allocated retained earnings to members—has been an issue within cooperatives and among their former members. A 1979 General Accounting Office report also dealt with this problem. At issue is how cooperatives can better plan to service net worth.

This detailed study is directed at various methods cooperatives can use to service net worth. Traditional and new approaches are addressed in a manner that should help cooperative leaders and their technical advisors improve the planning process and ultimately the organization's ability to systematically redeem equities. The Agricultural Cooperative Service is determined to continue to provide information and service to decisionmakers that will enable them to improve cooperatives' financial performance.

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PREFACE

This report provides information to help individual cooperatives adapt balanced equity redemption programs to their situations. Professional practitioners such as accountants, attorneys, extension workers, consultants, field representatives of regionals, technical assistants, educators, and other cooperative leaders are the intended audience.

Some sections will primarily benefit persons concerned with policy, legislative change, and nuances of the law, and, because of the detail and technical factors involved, will not interest all readers.

Other sections will appear elementary to those who understand cooperative principles and practices. Each State or cooperative organization may want to develop extension materials adapted to the unique characteristics of its cooperatives.

We have built on the research and experience reported in the literature and include a bibliography dealing with equity redemption.

Unqualified support, assistance, and encouragement for this effort have come from every sphere of farmer cooperative activity. Leadership in Agricultural Cooperative Service, USDA, provided the inspiration and resources. National cooperative organizations, particularly American Institute of Cooperation, National Council of Farmer Cooperatives, Cooperative League of the U.S.A., and Farm Credit Administration have been most supportive and have provided technical assistance.

All 12 district Banks for Cooperatives and the Central Bank for Cooperatives contributed the valuable time of top administrative and loan officers for interviews with the authors and have in other ways provided invaluable assistance. Executive secretaries of selected State cooperative councils also have been very helpful. Executives of several regional and local cooperatives unselfishly shared with us the benefit of their experience, giving us specific illustrations and helpful hints.

We wish to thank individuals from these organizations, as well as from several universities, for reviewing an earlier draft of this report. We appreciate the considerable effort many of them put into their reviews.

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HIGHLIGHTS

Cooperatives are under increasing pressure to redeem the equities of former patrons at the same time active patrons, faced with increased costs and higher tax rates, are demanding cooperatives pay higher proportions of patronage refunds in cash. All of this is occurring at a time when cooperatives themselves are under increased financial pressure due to recent inflation and high interest rates.

The urgency of the equity redemption problem has been accentuated by the 1979 General Accounting Office (GAO) report to Congress on cooperatives. This report suggests that unless cooperatives are willing to adopt more equitable equity redemption programs, legislation should be developed that would make it mandatory for cooperatives to pay interest or dividends on retained equities and/or retire retained equities within a certain time. The report also recommends that under such legislation, cooperatives not complying with the mandatory restrictions would lose their section 521 Federal income tax status.

Extent of the Problem

A 1974 Agricultural Cooperative Service (ACS) study indicated that only 32 percent of cooperatives operated *systematic* equity redemption programs—programs carried out under a definite plan with a fair degree of regularity and where the fairly predictable financial requirements could be taken into account in the cooperative's financial budgeting process. Systematic programs included the first in-first out revolving plan, the base capital plan, and redemption of a percentage of all outstanding equities regardless of year of issue.

An additional 39 percent of cooperatives that did not operate systematic programs operated *special* programs—those not carried out with predictable regularity or those involving predictable amounts redeemed in response to certain circumstances. Special programs included those in which there was redemption of equities held by estates or by patrons who were over a certain age, were no longer farming, claimed hardship, or requested redemption on an "on call" basis. The remaining 29 percent of cooperatives had no equity redemption program of any type.

Alternative Plans

According to the 1974 ACS equity redemption study, 90 percent of the cooperatives surveyed that had systematic equity redemption programs used the first in-first out revolving fund plan. Seven percent of the cooperatives used the percentage-of-all-equities plan, but 2 percent used the base capital plan.

In the *revolving fund plan*, retained equities are simply redeemed in the order in which they were allocated. As a result, the plan is easily understood by patrons and simple to administer. The plan generally results in a low disparity between patrons' use of the cooperative and the extent to which they provide equity if the revolving period is relatively short. However, increased needs for funds or low net savings can extend the length of the revolving

period almost indefinitely. Unless the revolving plan is used in conjunction with a special program, retired farmers, former patrons, and estates may have their investments tied up in the cooperative for unreasonably long periods.

Under the *percentage-of-all-equities plan*, a cooperative redeems a certain percentage of all equities held by patrons regardless of their age of allocation. The percentage to be redeemed can be varied to accommodate a variety of operating results and growth objectives. This plan is also simple to understand and to administer and encourages the business of new patrons. There is less of a burden on new patrons as they can begin to participate in equity redemption immediately and do not have to wait the length of the revolving period for equity redemption to offset retained patronage refunds or per-unit capital retain deductions. Equity, however, is not supplied in proportion to patronage, and this method of redemption lengthens the time required to transfer ownership from inactive to active patrons.

With the *base capital plan*, each patron's equity requirement is readjusted annually according to the cooperative's capital needs and the proportion of its business done with the patron during a moving base period. Patrons who are underinvested continue to provide retained patronage refunds and per-unit capital retains. In addition, they may be required to make cash investments, pay an interest charge to the cooperative on the amount of their underinvestment, or purchase equity from overinvested patrons. Overinvested patrons generally are not required to continue contributing retained equity and begin to receive at least partial redemption of excess investments.

The base capital plan is perhaps the most equitable one in that equity requirements are determined according to patronage. Because inactive patrons are generally cashed out in a relatively short time, use of the base capital plan reduces the need for special programs to handle estates and retired patrons. However, because of its complexity, the plan may be difficult to understand and to administer.

Special plans for redemption of equities held by estates or by patrons who are over a certain age, are no longer farming, move from the cooperative's service area, claim hardship, or request redemption on an "on call" basis can be used as an alternative to a systematic plan or in conjunction with one. Special equity redemption plans can provide a means for redeeming equities on a priority basis when there is no systematic plan, the systematic plan is not functioning as intended, or the cooperative is under financial stress. However, special plans make financial planning more difficult because of the unpredictable nature of the events that initiate redemption. In addition, they usually result in inequitable financing.

Facilitating Plans

A cooperative may provide a means for exchange of ownership from inactive or overinvested patrons to underinvested patrons. Transactions can be designed to comply with State and Federal securities laws that may limit transfers to members. The price of equities is privately negotiated. However, trans-

actions usually must be approved by the board. A market for equities can be used with the base capital plan to help patrons meet their base equity requirements. Sometimes members buy equity because it can be purchased at a discount and later redeemed at face value or because it is tied to marketing or service rights.

A few cooperatives redeem equity "on call" or "on demand" at a face or discounted value subject to board approval. The practice can cause problems unless the financial consequences are carefully considered and compliance with tax regulations is ensured. If equity is discounted, assumptions must be made about when it would have been redeemed at face value and about the discount rate.

Additions to unallocated reserves reduce the amount of equity to be redeemed and provide a cushion for lean years. These unallocated reserves usually are created from nonmember business. Some, however, feel that high levels of unallocated reserves violate the cooperative principle of ownership based on use.

Equity sometimes is not redeemed in cash but is converted to dividend-earning preferred stock or debt securities. Conversion of allocated equity to preferred stock or debt is usually motivated by a temporary cash flow problem or is done to allow members the option of leaving their money in the cooperative to earn dividends or interest. This approach can be used to avoid short-term cash flow problems as long as future debt payments do not become too burdensome. In some cases, creditors may dislike this approach, because cash used to pay dividends or interest reduces funds available for loan repayment and equity redemption. Conversion of equity to maturity-dated paper has contributed to serious financial difficulties for some cooperatives.

Financial Relationships

Cooperatives without plans for retiring patron equities have cited poor financial conditions as well as restrictions placed on them by lending institutions as obstacles to implementing equity redemption programs. They have also indicated that competitive reasons or pressure from younger patrons have forced them to place higher priority on high cash patronage refunds than on equity redemption.

The effect that redemption of patron equity and payment of cash patronage refunds have on the financial structure of a cooperative can be determined by examining its sources and uses of funds. Because redemption of patron equity and payment of cash patronage refunds are both uses of funds, they compete with each other and with other uses for available funds. Unless an increase in the redemption of patron equity or in the payment of cash patronage refunds is met with an increase in net savings or some other source of equity capital, the cooperative must increase borrowing or allow some depletion of its working capital. If the cooperative increases borrowing, its degree of solvency will be decreased; if it allows depletion of working capital, its liquidity will be decreased.

In most programs of equity formation and redemption, the level of cash patronage refunds, amount of equity redemption, and growth in allocated equity the cooperative can maintain are determined by the sales of purchased equity, per-unit capital retain deductions, and net savings available for allocation as patronage refunds after deducting dividends on patron equity, additions to unallocated reserves, and income taxes arising from these distributions.

Use of Nonqualified Allocations

Some cooperatives with low income tax rates may find that they can improve their programs of equity redemption by allocating patronage refunds in nonqualified form. Because patrons do not recognize the allocations for tax purposes until the allocations are redeemed in cash, they avoid the possibility of paying more in taxes on an allocation than they receive in cash. At the same time, the cooperative may improve its own cash flow if its average tax rate is lower than the percentage cash patronage refunds it would otherwise pay. If a cooperative has earned investment tax credit, it can use this to effectively reduce its tax rate.

In addition to providing improved cash flow, nonqualified allocations may offer patrons higher after-tax present values than qualified allocations. Qualified patronage refund allocations provide patrons the highest present values for low patron marginal tax rates and high cooperative average tax rates, but nonqualified allocations afford patrons the highest present values for high patron rates and low cooperative rates.

Nonqualified allocations may be even more attractive to patrons who expect to be in lower tax brackets when the allocations are redeemed because of retirement or other circumstances. However, because all patrons may not want the same tax treatment, cooperatives may consider allowing each patron to determine whether to accept an allocation in qualified or nonqualified form. Such a program would increase recordkeeping costs but allow patrons greater flexibility in planning their taxes. As an alternative, some cooperatives may wish to consider adopting bylaw provisions permitting redemption on nonqualified allocations at the request of individual patrons after a call date determined by the board of directors.

Legal Aspects

Managing the financial affairs of a cooperative is the legal responsibility of the board of directors. As part of that general responsibility, the board of directors is accountable to former and current patrons for their interest in the allocated equity "fund." As a general rule, the courts usually defer to the expert judgment of the board as to appropriate uses of or dispositions from that fund. Occasionally, a member resorts to legal action to compel the board to redeem retained patronage equity. In those few cases where a member has been successful, the board had usually failed to balance the interests of former or current patrons or has violated a cooperative article of incorporation, bylaw, or other standard operating procedure.

The rights of former and current patrons to retained patronage equity and the

duty of the board to redeem that equity is a matter determined by the cooperative's incorporation statute. No cooperative incorporation statute requires a cooperative to redeem its retained patronage equity within a certain period of time. A few statutes do not even recognize the use of retained patronage equity as a method of financing. Statutes that do recognize the use of retained patronage equity usually permit the board substantial discretion in establishing members' rights in that equity. In a few States, the agricultural cooperative incorporation statutes require redemption of retained patronage equity, but only in cases involving death, withdrawal, or expulsion of a member. Nonetheless, the effect of these mandatory redemption laws is minimal because cooperative bylaws usually narrowly define the equity to be redeemed.

Influence of Federated Cooperatives

Federated cooperatives can play an important role in the equity redemption practices of their member cooperatives. Patronage refunds from federated cooperatives often comprise a large part of a member local's net savings. Similarly, investments in federated cooperatives, primarily from retained patronage refunds, can account for a large portion of assets of a local. In fiscal 1976, \$514 million, or 27.9 percent, of the \$1.8 billion combined net savings and losses of cooperatives were represented by intercooperative distributions of patronage refunds. Intercooperative investments represented \$1.6 billion, or 8.5 percent of the \$18.6 billion total assets of cooperatives, an amount equal to 24.2 percent of total allocated equity. Because of the magnitude of these interrelationships, cash patronage refunds and equity redemption received from federated cooperatives can be important factors in determining the level of cash benefits local cooperatives can return to their farmer-members.

Some local cooperatives maintain two sets of equity accounts—one for retained patronage refunds from local operations and one for those from the cooperatives of which they are members. Members' equity in each account is redeemed separately, depending on the performance and needs of each cooperative. However, during financial difficulties, the economic condition of the local cooperative usually takes priority over strict adherence to separate redemption for each equity account.

Maintenance of separate equity accounts complicates the allocation and redemption of equity, and duplication of these processes is a major drawback to separate accounts. When local cooperatives have initiated separate equity accounts independently of federated cooperatives, lack of coordination has caused problems such as in redeeming estates. However, when federated cooperatives have encouraged separate equity funds and have coordinated their policies with members, dual equity systems have operated satisfactorily.

In an effort to coordinate their equity redemption practices with those of their member cooperatives, some federated cooperatives have developed participation plans for redeeming the equities of estates and, in some cases, of retired patrons. In these plans, when a local cooperative redeems equity held by one of its members, the federated cooperative redeems a proportion of the equity equal to the ratio of the local's investment in the federated cooperative to

the local's total equity or, usually, total allocated equity.

The longrun impact of these plans on the equity redemption practices of member locals may not be apparent. Participation plans may discourage the redemption of equities not covered by the plans. Federated cooperatives can avoid this problem by maintaining strong equity redemption programs in addition to their participation plans or by expanding their participation plans so they participate in the operation of their members' revolving funds or other systematic plans.

Impact of Mandatory Programs

Because of the poor performance of some cooperatives in redeeming equity, proposals calling for mandatory equity redemption again are being discussed in State legislatures and at the national level. No Federal or State statute currently establishes a mandatory revolving period or retirement date for equities. Likewise, no statute requires payment of interest or dividends on any class of patron equity. Legislative enactment of either of the GAO proposals for equity redemption and payment of interest or dividends would bring big changes.

A mandatory program of equity redemption would ensure a more timely retirement of equity, benefiting former patrons and overinvested current patrons. Similarly, mandatory payment of interest or dividends on retained equity would benefit inactive patrons and the heirs of deceased patrons by compensating them for use of their money. However, these programs would restrict the ability of cooperatives to determine distribution of cash benefits among patrons. In addition, they could severely affect the cash flow of cooperatives, creating financial hardships and bankruptcies for some, while diminishing funds available for asset replacement, growth, and meeting inflation in others. These programs would also reduce the ability of cooperatives to service debt, a condition that would concern lenders and might result in a restriction in the availability of credit.

Some cooperatives might be able to meet the requirements of mandatory programs by accumulating additional capital from patrons through direct investments, increased retained patronage refunds, or per-unit capital retains. Others could substitute debt for redeemed equity. However, despite the best intentions of membership and management, some cooperatives might not be able to generate cash flow adequate for replacing redeemed equity. Unless exceptions to mandatory restrictions could be made, financial failures might result.

Procedures for Program Adoption

The board of directors should carefully study adoption of an equity redemption program. The chairman should appoint a committee to examine the subject and make recommendations. Larger associations may have access to people with legal and financial expertise who can serve on the committee. If unable to find such talent, the committee should seek assistance from a regional cooperative, State cooperative council, State extension service, district Bank for Cooperatives, or ACS. Regardless of a cooperative's size, the board, manager, and patrons should be represented.

Before initiating a new program or changing the current one, the study committee should familiarize itself with the cooperative's financial operation. After analyzing the cooperative's sources of capital and methods of acquiring equity, the committee should evaluate the program and its relation to other uses of funds.

If evaluation indicates a change is needed, the committee should consider alternative programs. No single program for retiring members' capital can be developed to fit every situation. Nor can any model plan be recommended. Size and type of cooperative and membership structure are important considerations influencing the selection of a program. The committee may vary the plan to fit the particular situation of the cooperative.

The study committee also should determine ways of improving net margins and/or other sources of equity funding, if this appears to be hindering equity redemption or other financial needs. In addition, the committee should review sections of the cooperative's articles of incorporation and bylaws pertaining to equity acquisition and redemption and State cooperative laws relating to equity retirement.

A necessary step in adopting any kind of program is member education. After the board has approved a plan, patrons and employees should be informed. Member understanding is a key factor in determining how well the cooperative's total financial plan functions. Member satisfaction generates support for supplying equity capital needed to achieve both short- and long-range operating goals. Cooperative employees also should be knowledgeable about the plan, so they can clarify questions from patrons.

Improving Equity Redemption

An unsatisfactory record of equity redemption may be an indication of poor financial performance in general. Or it may suggest that current patrons simply are not contributing adequate amounts of equity. To increase equity redemption, a cooperative must improve its financial performance, reduce services, or acquire additional equity from other sources. In most cases, the following actions provide potential for strengthening an equity redemption program:

- Increasing efficiency of operation through better management of inventories, improved expense control, or increased productivity.
- Reevaluating Federal income tax status. Cooperatives that pay dividends on capital stock and have substantial nonpatronage income may benefit from treatment under section 521 of the Internal Revenue Code. Cooperatives that have substantial nonmember business but wish to pay patronage refunds only to members may benefit from "nonexempt" status.
- Replacing equity through direct investments, lower cash patronage refunds, and increased use of per-unit capital retain deductions.

- Increasing margins by charging higher prices for supplies and paying lower prices for commodities marketed. Patrons would receive an improvement in equity redemption in exchange for less favorable prices.
- Discontinuing the payment of dividends on allocated equity. As a consequence of receiving dividends, equity holders must wait longer for redemption of their equity.
- Increasing leverage. If a cooperative is in a good solvency position and has unused borrowing capacity, it can increase its return on equity by substituting debt, as long as the cost of borrowed capital is less than the rate of return.

EQUITY REDEMPTION: ISSUES AND ALTERNATIVES FOR FARMER COOPERATIVES

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I. BASIC ISSUES

Farmer cooperatives exist to financially benefit their member patrons. Benefits from investing in and patronizing cooperatives appear in several forms, including favorable prices, access to markets, assured supply of inputs, cash refunds, and growth of allocated equity. Allocated equities built up over years of active patronage are a major share of these benefits.

Ideally, these equities should be returned to patrons as their patronage declines or at least when it ceases. While many cooperatives have adequate equity redemption programs, most either have no systematic plan for retiring old equities or are slow to do so.

Inability or unwillingness of many cooperatives to cash out equity of inactive members has been a longstanding, persistent, and increasingly thorny problem. An increasing number of inactive members are complaining about their unredeemed equities. Their financial needs are forcing them to seek legal, legislative, and other means to have their equities redeemed.

Pressure has been building in several States and at the national level to pass laws requiring cooperatives to have active retirement programs. Many feel that decisions regarding equity redemption should remain in the hands of boards of directors, and that if cooperatives systematically redeem equities of inactive members, pressure for statutory redemption programs will likely subside. The redemption problem must be dealt with in a positive way if cooperatives are to fulfill their obligation to members and to maintain a positive image in society.

Pressure to redeem equities comes at an inopportune time for cooperatives. Several factors are converging to discourage equity redemption. Competing uses of funds and increasing capital requirements are surfacing as a result of inflation, high interest rates, energy shortages, erratic commodity prices, pressures for growth, and members' desire for a higher level of cash refunds. Other limitations cited by cooperatives are lower margins caused by increased costs and competitive pressures, limited redemption practices of federations to which they belong, restric-

tions imposed by lending agencies, members' reluctance to provide additional capital because of their own cash flow requirements, and State cooperative statutes.

Regardless of competing needs for cash, all cooperatives should develop systematic and balanced equity formation and redemption programs. Whether the cooperative chooses the revolving fund, base capital, or some other plan, it should accumulate member equity capital systematically, so that active members provide equity in proportion to their present patronage, and the overinvested equity is returned within a reasonable time.

Each cooperative is unique. Such factors as size, members' mobility, capital intensity of operations, access to markets, importance of nonproducer business, and type of cooperative (supply or marketing) illustrate the diverse and dynamic characteristics of cooperatives that influence programs and policies. Therefore, no one program will fit all cooperatives equally well. This report provides information that can be used to develop balanced equity redemption programs and policies adapted to individual situations. It reviews relevant issues, programs, and policies and illustrates situations where various programs are used.

Individuals developing programs should familiarize themselves with the issues and options presented. This publication does not offer a quick, prepackaged solution to redemption problems.

Issues directly associated with equity redemption are the primary focus of this manuscript. Other important financial elements of cooperatives are not analyzed. Excluded are such issues as capital formation or source of equity and opportunity cost of member capital. Equity redemption programs and associated issues unique to Production Credit Associations and Federal Land Bank Associations also are not covered.

Terminology

Terms judged to be important to this report are defined in appendix A. Most readers will be familiar with other terminology employed. Comprehensive glossaries on cooperatives in general are found in Schaars and Abrahamsen.

Surveys

Two surveys were conducted to gather supporting information used in this report. The first consisted of personal interviews with staff members at each of the Banks for Cooperatives, the Central Bank for Cooperatives, and selected national cooperative organizations. Information sought was status and constraints on redemption, perception of specific redemption programs and policies, and identification of novel programs and case study cooperatives. A second survey consisted of case studies conducted to illustrate novel and/or successful redemption programs. Appendix B carries abridged reports of these and other case studies.

Cooperative Principles

Unique features of cooperatives are centered in control, finance, and allocation of benefits. These features have their roots in generally accepted cooperative principles:¹

1. Service at cost (net savings distributed on a patronage basis),
2. Democratic control (one vote per member),
3. Ownership by member patrons, and
4. Limited return on capital.

These principles have been practiced and to some extent incorporated into laws and regulations. For example, the Farmer Credit Act of 1971 regulations require that to borrow from Banks for Cooperatives, a cooperative must meet either the second or fourth condition. These same conditions are required of cooperatives that wish Capper-Volstead protection.

A fifth principle fundamental to equity redemption is the members' obligation to finance cooperatives according to use. Although this principle is not universally listed² in treatises on the topic, it is a logical extension of the first and third principles and the doctrine of fairness that pervades cooperative literature. The logic is compelling. If benefits are distributed according to patronage, benefactors should provide equity or risk capital in the same proportion. A member with 2 percent of a cooperative's volume should reap 2 percent of the benefits, provide 2 percent of needed equity, and thus bear 2 percent of the risks.

Failure to systematically redeem equity of inactive and other overinvested members violates the first three principles in addition to the principle of investment according to use. Overinvested members bear the burden of helping finance a cooperative whose services they do not receive. Unless opportunity cost on capital is assumed to be zero, underinvested members would be receiving service at less than cost.

In several States, this means ownership without control, because voting rights of inactive members often are terminated. If voting rights of inactive members are not terminated, current members are not in total control. Perhaps the primary reason for some inactive members' hostile attitude toward their cooperative is their own financial needs, not the violation of these principles. This spotlights the wisdom and logic of the fifth principle.

Abrahamsen stated that although financing according to use is in harmony with established cooperative philosophy, it has not been accepted universally. The idea is valid because it takes "member ownership one step further by specifically identifying the extent of that ownership. The

problem is to devise techniques (and cash flow) for making it work effectively.”³ The information that follows can be used to develop these techniques. The economic feasibility and management of each situation determines the adequacy of cash flow.

Need for Change

Elected and appointed public officials have received complaints from former patrons of cooperatives about the futility of getting cooperatives to redeem old equities. Requests made directly to the cooperative often have been ineffective—usually because of a weak financial position. Board members are torn between requests for redemption by inactive members and the need for equity to support services required by current patrons. Generally, the board has opted in favor of maintaining the financial integrity of the cooperative to serve current patrons.

When they seek relief in the courts, former members discover discretionary and fiduciary powers of the boards have priority over inactive equity-holder requests. Lacking a vote in the cooperative and being shut off by legal principles that will not substitute judicial judgment for that of the board, members have found sympathy from their elected State and Federal officials. In a few States, this has produced legislative attempts to force equity redemption.

Analysis of available data on equity redemption reveals that the basis for these pressures is more than a public relations problem. A serious flaw exists in the performance of many cooperatives. Nearly 30 percent of the 857 reporting farmer cooperatives in a 1976 USDA study⁴ had no equity redemption program. Another 39 percent did not have a systematic program, i.e., any redemption resulted from largely unpredictable events, such as death (table 1-1).

The 28 livestock and 23 wool cooperatives in this sample are largely shipping associations and local wool pools that have no or limited allocated equity. Therefore, equity redemption is of little consequence. If these cooperatives are removed from the data in table 1-1, still, 27 percent of the remaining 806 cooperatives have no program.

The General Accounting Office (GAO) report found similar results⁵ in its survey of 83 cooperatives (table 1-1). The Brown and Volkin study found that in cooperatives with no equity redemption program, inactive members held 33 percent of the equities; those with some type of program had 29 percent in this category⁶. The problem is, however, more severe than these data suggest, because they do not take into account the equity of active but overinvested members.

The problem of long revolving periods and financing by inactive members seems to be widespread but is more pronounced in some commodity groups and in some geographic areas. For example, dairy cooperatives with no redemption program reported 78 percent of their members were inactive and these inactive members held 61 percent of the equity in

their cooperatives. Fruit and vegetable cooperatives in this same category had 33 percent inactive members who accounted for 6 percent of the equity⁷. A recent survey made by Purdue University for Agricultural Cooperative Service (ACS) found the oldest equities in 59 midwestern grain marketing and farm supply cooperatives averaged 34 years in age compared with 11 years for 28 Wisconsin cheese cooperatives (table 1-2).

Some managers do not view equity redemption as a high priority. These managers reason, "Why should the cooperative increase liabilities at high interest rates to redeem equity? Inactive members don't need cash like the cooperative." Some patrons have become so upset with this attitude and their cooperatives' failure to redeem equity or to pay a higher percentage of cash refunds that they demonstrate their low regard for cooperative equities by refusing to accept patronage refunds. Whether these feelings are justified or not, they must be treated realistically. The situation requires a serious educational program as well as a revamping of equity formation and redemption.

Pressure from another direction, represented by the GAO recommendations, indicates that if cooperatives do not voluntarily redeem equity, legislation for mandatory redemption and/or dividend payments on equity may be proposed⁸. Such legislation has been considered in several States, proposed in a few,⁹ and established by administrative decision in Puerto Rico.

Major national cooperative organizations such as National Council of Farmer Cooperatives, American Institute of Cooperation, Cooperative League of the U.S.A. and Agricultural Cooperative Service uniformly support efforts to promote equity redemption among cooperatives. They argue that, first, it is only fair that members should finance their cooperative according to use and second, legislation mandating some kind of equity redemption will be enacted if cooperatives do not take the initiative. These organizations have suggested that cooperatives unable to retire old equities should consider merger or liquidation. They see failure to systematically redeem equities as one of cooperatives' biggest member relations problems.

The fact that current users do not provide a substantial portion of equity, plus the negative attitudes of some managers and members, and the threat of mandatory redemption legislation certainly demonstrate that many cooperatives must improve their equity redemption practices.

Advantages and Disadvantages

Members, the board, and management obviously will be concerned about the trade-offs associated with adopting or changing an equity redemption program. The relative importance of each advantage and disadvantage will depend on the individual situation.¹⁰ Cooperatives and their members gain several benefits when they follow carefully tailored equity redemption programs that take into account the needs of all members:

Table 1-1—Equity redemption plans used by randomly selected U.S. cooperatives

Type of plan	Study	
	Brown & Volkin ¹	GAO ²
	<i>Percent</i>	
Systematic only ³	12	30
Systematic and special ⁴	20	—
Special only.	39	46
No program.	29	24
Total.	100	100
	<i>Number</i>	
Sample size ⁵	857	83

¹Brown and Volkin, p. 5.

²U.S. General Accounting Office, p. 41.

³Revolving fund, base capital, and percentage-of-all-equities plans.

⁴Redemption takes place following specified events, e.g., death.

⁵Excludes farm credit and telephone cooperatives.

Table 1-2 — Comparison of oldest equities of cheese and grain marketing and supply cooperatives, 1979¹

Item	Type of cooperative	
	Wisconsin cheese	Midwest grain and farm supply
Average age of oldest equities (<i>years</i>).	10.6	34.2
Range of oldest equity in each cooperative (<i>years</i>).	5-17	² 3-90
Cooperatives with equities over 19 years (<i>number</i>).	0	33
Sample size (<i>number</i>).	28	59

¹Unpublished data supplied by Robert D. Boynton, Purdue University, West Lafayette, Ind.

²Frequency at the extreme was 4 cooperatives at 50 years, 3 from 60 to 65 years, 2 at 78 years, and 1 at 90 years.

1. The most important benefit is that equity is provided on a fair and equitable basis by all classes of members. Each member provides equity according to use, upholding the intent of cooperative principles.

2. Compliance with principles would be empty without the resulting di-

rect benefits to members and their cooperatives. Members see their equity working for them—with the cooperative financed according to use and overinvested equity returned in cash or interest-bearing securities. Members are likely to value their equity more and demonstrate a greater understanding and commitment to cooperative principles during difficult times.

3. In some instances, reliable equity redemption programs enable members to use their cooperative equity as collateral for loans. Financial officers in such cooperatives report they frequently receive inquiries from lending institutions to verify members' claims. Equity thus acquires value in the eyes of members rather than being viewed as "dead money" or "paper equities."

4. Current patrons would be encouraged to increase their patronage; other farmers would be motivated to start patronizing cooperatives. More than 65 percent of the farmers surveyed for the GAO report indicated they would start or increase patronage if they did not have to wait so long to receive their equities in cash¹¹.

5. Members can view their equities as part of their retirement or at least their life insurance programs.

6. The strength of arguments against cooperatives that point to negative cash flow of patronage refunds and low present value of allocated equities is reduced.

7. From a management perspective, one of the most important advantages of an active equity redemption program is that the board and manager systematically have to develop and implement effective financial policies and plans. This would surely improve financial performance and, therefore, could be the most important benefit.

8. Viable redemption programs also decrease political pressure for mandatory equity redemption legislation.

An aggressive redemption program may have some negative aspects that must be carefully considered:

1. Such a program may strain a cooperative's financial position. Funds might be siphoned for redemption when they should be used to maintain or increase debt-carrying capacity or to replace assets. Provision must be made for the financial integrity of the cooperative. This topic is addressed later in the report. It has been argued, however, that a good redemption program could mean more, not less equity. It often means more current investment for those whose patronage is increasing and less or none for those whose patronage is declining or has stopped.

2. Cash patronage refunds and/or dividend payments on equity may have to be reduced. This may produce a conflict, because some members have strong feelings about receiving these payments. Many farmers want

more than the 20 percent minimum (required by the Government) to help offset tax obligations. Although conflicts always exist over the use of funds, this may be one of the more difficult to resolve (see chapter II).

3. Regardless of the plan used, members must supply the funds. This may discourage patronage, especially from financially strapped farmers. Of course if farmers can profit from patronizing a cooperative, they can usually find a way to provide equity. But they must understand why their cooperative needs their support.

4. Unfortunately, an equity redemption program that provides flexibility and equitable financing may be difficult to understand. This may be troublesome if members have to provide additional capital. Obviously, much work is involved, not only in developing a new program, but in educating members.

Most problems created by redemption can be overcome or minimized, particularly if all aspects of the situation are dealt with. A convincing member education and public relations program will not guarantee success without the financial realities in place. Recommendations to handle these problems, including the financial trade-offs, are given later in the report. And, depending on the point of view, some arguments against equity redemption could be considered benefits.

Responsibilities of Members

Members' key financial responsibility is to provide their share of equity capital. An adequate equity base is essential, if cooperatives are to survive business risks and obtain credit and loans at favorable rates. Members must ascertain the marginal rate of return from investing in a cooperative as compared with other investments. To maximize returns, investments should continue to be made in cooperatives, as long as total returns from them are greater or as great as those from other investments. A difficult part of this task is evaluating intangible and indirect benefits such as access to markets and a reliable source of supply. When a member invests in a cooperative, he or she must understand that equity is risk capital and therefore subject to loss. Further, members' funds that are guaranteed for redemption or have a due date are not equities and would be classified as a liability of the cooperative. Such investments could not be used as equity in supporting debt.

However, if the equities are allocated, especially if issued as qualified refunds, members have a reasonable right to expect redemption subject to normal business risk of loss. If a cooperative does not expect to redeem equities, they should never be allocated. No member should have to pay income tax on allocations they will not eventually receive in cash.

Members must also recognize that redemption may be delayed by situations other than poor performance. If a cooperative consistently offers favorable prices,¹² patrons receive immediate benefits rather than re-

tained allocated equity. The resulting narrow margins may not generate sufficient funds to meet redemption commitments as well as cash flow demands.

Others support minimum redemption, because in a cooperative that generates equity only through allocations from retained patronage refunds or per-unit capital retains, members have benefited from equity provided by their predecessors. Therefore, it would only be fair, when they become inactive, to leave equity in the cooperative until new members accumulate their share.

Members should become involved in the development process by serving on committees and by registering their ideas, suggestions, and feelings with the board, so policies can reflect the desires of all members. They must then understand and vote on the proposal. Ignorance and blind support will likely produce poor performance. Finally, members should make the effort to understand and support the equity formation and redemption program adopted.

FOOTNOTES

¹ See Abrahamsen, pp. 48-68, for a discussion for the evolution, rationale, and degree of adherence to these principles. Also see Black and Knutson; Schaars; and Roy.

² Examples of other principles not universally accepted or practiced are education of members, open membership, and operation on a cash basis.

³ Abrahamsen, p. 66.

⁴ Brown and Volkin, p. 5.

⁵ U.S. General Accounting Office, p. 41.

⁶ Brown and Volkin, p. 22.

⁷ Brown and Volkin, p. 23.

⁸ U.S. General Accounting Office, p. 44.

⁹ Cook; and Harling.

¹⁰ See chapter VIII.

¹¹ U.S. General Accounting Office, p. 42.

¹² Favorable prices mean that patrons pay relatively low prices for supplies and services and receive relatively high prices for farm marketings.

II. FUNDAMENTALS OF COOPERATIVE FINANCE

Unique Features

Unique features of financing agricultural cooperatives are discussed in this section.¹ Readers familiar with cooperative finance may wish to skim this section.

A cooperative's equity differs from that of a noncooperative firm in several fundamental ways. Common stock or membership certificates with voting privileges can be held only by qualifying persons, generally agricultural producers. Frequently, nonpatronage preferred stock can be held by employees and the general public as well as members. Control is typically one vote per member, regardless of the amount of equity owned. Cooperatives differ from noncooperative corporations in that surplus from operations is distributed to patrons largely on the basis of patronage rather than to stockholders on the basis of stock ownership.

Even though members supply the equity, they usually do so not for capital appreciation or dividends, but only for benefits arising from patronage. Usually equity is redeemed at book or par value, whichever is less. However, some cooperatives recently have considered redeeming equities at appreciated values. This has occurred where assets, especially land, appreciate and where a large share of net savings are allocated to unallocated reserves. Generally accepted financial policies and accounting procedures have not been established to handle situations where apparent market value of a cooperative exceeds its book value.

Equityholders in cooperatives cannot liquidate holdings as can stockholders in a noncooperative corporation that sells stock to the general public. Rarely do cooperative members even exchange equity. As a result of the lack of incentive to invest in cooperatives for capital appreciation and/or dividends, cooperatives have been financed largely with deferred patronage refunds or per-unit capital retains. Acquiring equity this way also helps realize the desirable proportion of investment to patronage.

The next step in maintaining this ratio is the obligation to redeem patron equities. Therefore, unlike most corporations, equity is temporary. Only preferred stock purchased for investment and unallocated reserves can be considered permanent. However, the board decides when to redeem equities. This protects the financial integrity of the cooperative from fixed obligations to redeem. Poor management and/or adverse economic conditions can complicate equity redemption.

Capital requirements for investments in plant and equipment and everyday operations are not very different for cooperatives than for any other firm engaged in the same activity. Another important similarity with other incorporated businesses is that in cooperatives equity represents risk capital. Any business reverses are absorbed by the equity of owners. In case of liquidation, all other obligations must be met before any funds can be returned to equityholders.

These characteristics are typical of agricultural cooperatives. Selected modifications are discussed later in this report.

Types and Sources of Equity

A study of 5,795 U.S. farm marketing, supply, and related service cooperatives showed they had equity of \$7.7 billion (42 percent of total assets) in 1976 (table 2-1). The names and conditions under which these equities were issued varied widely. Some were evidenced by various types of certificates; others by book credits or allocated reserves. Some bore dividends; most did not.

Some equities were sold to members as direct investments; many represented retained patronage refunds and per-unit capital retains (table 2-2). According to this same report, patrons of 55.2 percent of the cooperatives acquired allocated equity by purchase, but this accounted for only 10.7 percent of allocated equity at the close of the fiscal year. Patrons of 88.6 percent of the cooperatives acquired allocated equity by retained patronage refunds. This accounted for 77.1 percent of allocated equity. Patrons of only 5.3 percent of the cooperatives used per-unit capital retains, but this accounted for 12.2 percent of allocated equity².

Direct Investments

Direct investment refers to cash purchase of common or preferred stock, membership certificates, or other evidences of equity. This is the way initial funds for starting a cooperative are raised. A number of cooperatives continue to acquire needed equity by selling additional capital stock or other equity instruments to members and others. Some of this new capital is used to redeem equities of inactive members. At other times,

Table 2-1—Relative importance of major types of equity in farmer marketing and supply cooperatives, at close of fiscal year 1976

Type of equity	Number of cooperatives	Amount	
		<i>Million dollars</i>	<i>Percent</i>
Common stock	4,212	1,259	16.3
Preferred stock	2,332	1,399	18.1
Membership certificates	393	31	.4
Certificates of equity			
Qualified	4,641	3,786	49.0
Nonqualified	538	85	1.1
Unallocated reserves	4,820	1,167	15.1
Total	5,795	7,727	100.0

Source: Griffin and others, pp. 38 and 40.

Table 2-2—Methods used to acquire allocated equity capital, at close of fiscal year 1976

Type of cooperatives	Cooperatives	Cooperatives with allocated equity acquired by—				Percentage of total allocated equity acquired by		
		Purchase	Retained patronage refunds	Per-unit capital retains	Total allocated equity	Purchase	Retained patronage refunds	Per-unit capital retains
	.....	Number	.....	.....	Million dollars		Percent	
Farm supply.....	2,164	1,244	1,898	5	1,764	16.0	83.7	0.3
Marketing.....	1,674	921	1,328	260	2,135	9.8	54.2	36.0
Marketing/farm supply.....	1,957	1,035	1,906	41	2,661	8.0	91.0	1.0
Total.....	5,795	3,200	5,132	306	6,560	10.7	77.1	12.2

Source: Griffin and others, table 36 and 37, page 49.

retained refunds and per-unit capital retains are more convenient ways for members to invest their equity.

In the 1976 study, only 19 percent of the outstanding common stock and 25 percent of the preferred stock had been sold directly to stockholders. The proportion of total allocated equity acquired by direct investment ranged from 5 percent in grain to 16 percent in farm supply, and 36 percent in sugar cooperatives³.

Retained Patronage Refunds

Patronage refunds are allocations to members of net savings resulting after operating expenses, taxes, and other authorized deductions are subtracted from a cooperative's total revenue. These allocations, made to member patrons on the basis of patronage, may or may not be segregated by product or service. They may be in cash or retained by the cooperative (noncash patronage refunds). Noncash allocations may be issued as qualified or nonqualified. If qualified, the patrons to whom the allocations are made must recognize the amount for Federal tax purposes, and the cooperative can deduct it from its taxable income. If nonqualified, the cooperative recognizes the allocation as taxable income, but the patron receiving it does not. When the cooperative redeems these allocations in cash, the patron must recognize them for tax purposes, and the cooperative deducts them from its taxable income. (See chapter VI for detailed elaboration on taxation and alternatives for equity redemption.)

Cooperatives achieve the "operation at cost" principle by issuing patronage refunds. The residual-after-deductions (net savings) is used, because it is usually impossible to accurately establish prices that will result in zero net savings. Further, cooperatives use market prices for two major reasons: (1) To provide a flow of funds for growth and (2) to service equity.

Retained patronage refunds enable patrons to accumulate equity in proportion to use, although not as directly as per-unit capital retains. A major flaw of retained patronage refunds is their dependence on net savings, which fluctuate with the fortunes of the cooperative. They are, however, better adapted to supply and service cooperatives than are per-unit capital retains (see next section.) Retained patronage refunds are the most popular source of cooperative equity (table 2-2), especially among farm supply cooperatives.

Per-Unit Capital Retains

Per-unit capital retains are patrons' investments in cooperatives based either on the physical units handled by the cooperative or on a percentage of sales. Per-unit capital retains generally are made according to a bylaw provision or membership agreement that authorizes the cooperative to make a specific deduction for capital purposes from proceeds due pa-

trons or from cash advances. Because per-unit capital retains are not determined by the net margins of the cooperatives, they provide a more stable source of cash flow than do retained patronage refunds.

Per-unit capital retains may be allocated to patrons in either qualified or nonqualified form. They are taxed similarly to patronage refunds. A significant difference is that the cooperative is not required to distribute to patrons a minimum of 20 percent of per-unit capital retain allocations in cash.

The use of per-unit capital retains by farm supply, marketing, and marketing/farm supply cooperatives in fiscal year 1976 is shown in table 2-2. Only 270 or 4.7 percent of the 5,795 cooperatives made per-unit capital retain deductions during the year, amounting to \$129.3 million, compared with \$78 million in fiscal 1970. At the close of fiscal 1976, equity acquired by per-unit capital retains made up \$800.3 million or 12.2 percent of cooperatives' \$6.6 billion total allocated equity.

Marketing cooperatives are the primary users of per-unit capital retains, with farm supply and marketing/farm supply cooperatives making relatively little use of them. During fiscal 1976, 13.7 percent of marketing cooperatives deducted per-unit capital retains, and at the close of the year, 36.0 percent of the total allocated equity of marketing cooperatives was equity acquired by per-unit capital retains. The 35 largest marketing cooperatives accounted for \$86.6 million of the \$129.2 million per-unit capital retains deducted in fiscal 1976.

The use of per-unit capital retains is particularly popular among cooperatives operating on a pooling basis on the West Coast and in Florida but is not very popular in the Midwest. Cooperatives marketing fruits and vegetables and dairy products withheld \$84.3 million of the \$129.2 million in per-unit capital retains deducted in fiscal 1976. At the close of the year, 71.5 percent of the total allocated equity of fruit and vegetable marketing cooperatives was acquired by per-unit capital retains in contrast with 1.2 percent in cooperatives marketing grain, soybeans, and soybean products.

Competing Uses

Legitimate claims of overinvested members must be recognized when evaluating competing uses for available funds. Dividend payments on equity, cash patronage refunds greater than 20 percent, and growth compete directly, because these funds obviously cannot be used for redemption. Although dividends and cash refunds are popular with members, for several reasons, they should be minimized to facilitate equity redemption.

Asset growth competes with redemption in the short run. But redemption may be enhanced in the long run if capital expenditures are selected for their return on investment and turn out as expected. Favorable prices to members and inflation may frustrate redemption goals. Chapter

V discusses how equity redemption is affected by various levels of cash refunds, growth, and return on net worth.

Dividends on Equity

Payments of dividends on equity not only represent a relatively small distribution of net savings because of legal restrictions on dividend rates, but two-thirds of U.S. cooperatives distributed no dividends in 1976. The percentage of net savings distributed as dividends increased from 5.7 percent in 1954 to 7.0 percent in 1970 and then dropped to 2.1 percent in 1976. Cooperatives in eastern seaboard States paid a much higher rate in 1976 (5.9 percent) than the rest of the country (1.4 percent); marketing (2.5 percent) paid more than supply cooperatives (1.5 percent). Section 521 cooperatives distributed 4.1 percent as dividends, compared with 1.4 percent for nonsection 521 cooperatives⁴. This reflects the exclusion of dividends from taxable income for section 521 cooperatives.

Funds used to pay dividends on equity cannot be used to redeem equity. Thus, paying dividends worsens the equity redemption situation. Further, if members expect dividends on a regular basis, dividends could become, in effect, an added fixed interest expense. If the cooperative does not qualify under section 521, dividends are subject to corporate income tax. This erodes funds available for redemption and the business-at-cost principle (if paid from member business) even further.

A stronger case can be made for paying dividends on equity from savings resulting from nonmember business. In fact, the after tax savings from nonmember business could be allocated on the basis of investment. Nonmember business is analogous to that of an investor-oriented corporation. The members have an investment in the equity of an organization that provides goods and services to the public and pays income taxes on the net proceeds. Any savings generated from nonmember business is the direct result of investment rather than patronage and therefore represents the profits of a noncooperative corporation. These savings or profits could thus be allocated according to investment.

Dividend payments may be popular among some members.⁵ Loan officers of Banks for Cooperatives report that some cooperative members strongly favor this practice. Their boards would not dare omit dividends as a form of distributing net savings. Apparently, these members feel that otherwise their investments in the cooperative are "dead money." This feeling is justified if equity is not held in proportion to patronage, or if heavily invested members do not realize any benefits over those who have little or no investment. At relatively high interest rates, they could argue, the discounted value of their equity approaches zero. But members should realize that their invested funds are working for them through savings and indirect benefits. If this is not true, the member either should shift patronage to another firm or try to bring about changes that would produce such benefits.

Many members may prefer equity redemption to dividends if they realize

direct and indirect benefits coupled with redemption on a timely and equitable basis--particularly if cash refunds are adjusted according to whether they are overinvested or underinvested in relation to patronage.

In some instances, cooperatives may have to continue paying dividends on equity notwithstanding resulting redemption problems. Members of these cooperatives may continue to insist on dividends despite the previous arguments. Some States require cooperatives, before redeeming any equity, to pay authorized dividends. Dividends on preferred stock are obviously a priority obligation in these situations.

The GAO report recommended that legislation be proposed "... to make it mandatory for cooperatives to pay interest or dividends on retained equities..." and/or redeem equities within a given time limit. It was argued that, "This alternative could increase patronage...and improve the viability of cooperatives as a competitive force in the marketplace." The exact opposite may result because cooperatives would have to adjust their prices to a less favorable position to acquire the necessary cash flow⁶. While it is true, as the report suggested, that payment of dividends would compensate retired and inactive members and estates, redeeming those equities would be even better. Cash flow used to pay those dividends could be better spent in redeeming equities.

Cash Patronage Refunds

Farmer cooperatives vary considerably in the level of cash patronage refunds. In 1976, these ranged, among commodity marketing cooperatives, from 27 percent for grain to 87 percent for sugar cooperatives. Only 23 percent of net savings was paid in cash by cooperatives in the Louisville Bank district, while 82 percent was paid in the Sacramento district⁷.

High cash refunds may be given for many reasons. A major reason is to satisfy cash flow requirements of members in tax brackets above 20 percent. Because their incomes are bloated by inflation, patrons may be forced into higher income tax brackets even if their real incomes have not gone up. Thus, active patrons may request a higher proportion of cash patronage refunds to pay taxes on qualified patronage refunds. Negative cash flow problems of such members could be avoided by offering them the option of receiving nonqualified refunds. (See chapter VI where this option and associated trade-offs are discussed in detail.)

High cash refunds benefit current members and may encourage patronage. But this practice would put overinvested members at a disadvantage, unless underinvested members made up their share of equity by direct investment or per-unit capital retains, or purchased equity from overinvested members.

Another argument for high cash refunds is to relieve cash flow problems of patrons who just have started farming or are significantly expanding operations. Unfortunately, these patrons also are those most likely to be underinvested. Solutions to this problem vary. One is for the patron to

make a cash investment by obtaining a loan. Another more common approach is allowing the underinvested member to build up investment over time with retained refunds or per-unit capital retains. During the underinvested period, the patron must either pay interest to the cooperative to compensate for the investment shortage or rely on the equity of overinvested and inactive members.

Other justifications for high cash patronage refunds generally have little merit. For example, "Why should cash from net savings be given to inactive members when it was our patronage that generated the net savings?" This line of reasoning forsakes those benefactors whose equity kept an underinvested patron in the cooperative and enabled the organization to continue as a going concern.

Favorable Prices

Favorable prices are sometimes an important benefit from patronizing cooperatives but one that is difficult to evaluate. The cooperative may wish to disturb the price structure of their market or pass on benefits immediately by paying above market prices for patrons' products or by offering services and supplies below prevailing market prices. Many members prefer to receive their benefits this way⁸. But favorable prices usually result in lower net savings and less cash to satisfy the competing needs of equity redemption, growth, and inflation.

Favorable prices generally are not a wise policy to follow in the long run, because it may erode the cooperative's equity position. The cooperative then would be unable to survive unexpected reverses or even obtain loans at favorable rates. In addition, if a cooperative consciously follows a favorable price policy, members should not expect an active redemption program. They must realize that they already will have received their financial benefits. In such cases, management should frequently inform members about the reasons for not operating an active equity redemption program. An active redemption program and favorable prices can exist simultaneously if equity is obtained directly by cash investments from underinvested members or if an unusual cost structure exists.

Growth and Inflation⁹

Unless financed by debt, cooperative growth competes with equity redemption for capital. Even then, interest and principle payments reduce the cash available for equity redemption. High inflation also complicates growth based on normal expansion of cooperative services and increases the cost of replacing capital assets. In most cases, depreciation reserves determined by conventional business practices and based on the prices of original assets are insufficient to replace these assets. Inflation also increases the demand for capital to fund current assets, a demand necessitated by inflated values of inventories and accounts receivable.

If a cooperative's net margins keep pace with inflation, cash flow from operations may be adequate to fully replace assets and meet other cash

requirements, including equity redemption. However, margins may not keep up or may be subject to cost-price squeezes that often occur in agricultural industries, especially during inflationary periods, as markets adjust to increasing prices. In these cases, to have an equity redemption program, cooperatives face the alternatives of postponing asset replacement and growth or increasing debt. Unfortunately, the increases in interest rates usually resulting from inflation make debt more difficult to handle.

Similarly, farmers and inactive members are subject to the same financial pressures as cooperatives. Inflation has forced most cooperative members into higher tax brackets; this in turn has intensified pressure on the cooperative for higher cash refunds. At the same time, because of inflation, retired members may find living on fixed incomes much more difficult. While the equities of inactive or ineligible members remain in cooperatives, their purchasing power is continually eroded by rising prices. Thus, inactive members may press cooperatives to increase equity redemption.

FOOTNOTES

¹ A comprehensive treatment of this topic is found in Abrahamsen; and Griffin and others.

² Griffin and others, p. 56.

³ Griffin and others, pp. 51 and 55-56.

⁴ Griffin and others, p. 85.

⁵ Cobia and Navarro, p. 4; and U.S. General Accounting Office, p. 64.

⁶ U.S. General Accounting Office, p. 43.

⁷ Griffin and others, p. 91.

⁸ Cobia and Navarro, p. 3.

⁹ For further discussion of the impact of inflation on cooperatives and patrons, see Royer and Skinner; and Skinner and Royer.

III. ALTERNATIVE EQUITY REDEMPTION PLANS

Alternative equity redemption plans discussed in this section are: (1) revolving fund, (2) base capital, (3) percentage-of-all-equities, and (4) special plans. Special plans (redemption triggered by an event such as death or moving away), are by far the most popular (table 3-1). Fifty-nine percent of all cooperatives redeemed equities in this way. However, 20 percent combined special plans with other plans, leaving 39 percent using only special plans. The revolving fund plan was second in popularity. Fewer cooperatives use the base capital and percentage-of-all-equities plans.

These programs should be evaluated in light of several criteria. Although the criteria are listed here in order of their usual relative importance, that ranking may differ according to the individual cooperative's market access, size, number and distribution of members, and competitive environment. Principal criteria are:

1. Facilitate capital acquisition to provide necessary cash flow for debt servicing, equity redemption, growth, and services members want. This criterion is listed first because a cooperative must have adequate capital.
2. Ensure that members supply equity in proportion to their current patronage. A given level of risk capital is required; a primary function of a redemption program is to apportion this responsibility equitably among members, according to their current use of the cooperative's services.
3. Provide flexibility to accommodate a wide range of financial operating results and members' characteristics and needs. The degree of flexibility will depend on the potential impact of expected variation in relevant factors such as member mobility and level of net savings.
4. Recognize that the board of directors must control the redemption policy on behalf of all the members.

Table 3-1—Equity redemption plans used by 857 randomly selected U.S. farmer cooperatives, 1976

Type of plan	Percent
Revolving fund.	29
Base capital.	1
Percentage-of-all-equities.	2
Special only.	¹ 39
No plan.	29
Total.	100

¹ An additional 20 percent of the other cooperatives having plans also used special plans

5. Recognize tax and other statutes and existing contracts with creditors and others.
6. Be easily administered without excessive operating costs. This criterion will be more important for cooperatives without computers to maintain patronage records.
7. Be easily understood by members and employees in contact with members. Members generally will not enthusiastically support programs they find difficult to understand or in which they cannot see benefits.

The best redemption program will likely have to compromise on some of these criteria. It is the board's responsibility to make final judgments.

Revolving Fund Plan¹

Probably no other term is associated more closely with cooperative finance than "revolving fund." This plan is also known as "first-in, first-out" or "fifo" and "revolving capital." Under a revolving fund plan, a cooperative pays off or retires in cash the oldest outstanding equities when required net worth has been accumulated. Revolving funds periodically adjust ownership through a double process of (1) obtaining funds from patrons in proportion to patronage, predominately by retained patronage refunds and/or per-unit capital retains, and (2) retiring these investments in chronological order. The revolving fund concept has undergone a long evolution. Acquiring capital according to patronage came into being long before a systematic approach to redemption was introduced. The first documented finance plan that incorporated redemption on a chronological schedule in the United States was in 1912. By 1914, the concept was further refined and titled the "rotary fund."²

Description of a Revolving Fund

The revolving fund returns to patrons investments they made in previous years on a regular and chronological basis. Table 3-2 illustrates how a revolving fund operates. In this member's first year with the cooperative, \$500 was required as paid-in capital. From then on, new equity was generated annually from retained net margins allocated to members based on patronage with the cooperative. By 1981, this member's equity had reached \$3,900. The cooperative's board of directors decided to adopt a policy of revolving members' equity on a systematic 5-year basis unless the cooperative's financial condition precluded it. Therefore, as shown in table 3-2, the 1976 equity of \$500 was returned in 1981 to the member in cash—leaving a balance of \$3,400. In 1982 and 1983, the cooperative was able to maintain its 5-year revolving cycle. In 1982, new equity from retained patronage refunds amounted to \$750; \$650 in old equity, allocated on the books in 1977, was retired, leaving an ending balance of \$3,500. Likewise, in 1983, the cooperative redeemed this member's 1978 allocations of \$900.

Table 3-2—Illustration of revolving fund for an individual member

Year	Beginning balance	New equity	Total	Amount retired	Ending balance
<i>Dollars</i>					
1976	0	500	500	0	500
1977	500	650	1,150	0	1,150
1978	1,150	900	2,050	0	2,050
1979	2,050	700	2,750	0	2,750
1980	2,750	550	3,300	0	3,300
1981	3,300	600	3,900	500	3,400
1982	3,400	750	4,150	650	3,500
1983	3,500	1,000	4,500	900	3,600

Special Adaptations

Although the general concept of revolving finance is straightforward, specific plans may be more complex. This occurs, because the plan is adapted to the unique features of a cooperative and to various State laws. Complexities also arise when cooperatives mix features of other programs with the revolving fund plan or set up several revolving funds within the same association.

Separate revolving funds are found in both centralized and federated cooperatives. Dairymen, Inc., a centralized cooperative, for example, has five revolving funds segregated on the basis of source of investment (per-unit capital retains, net savings on member business in two separate divisions, and net savings on nonmember business) and equities from predecessor cooperatives. (See appendix B, where this program is described in greater detail.)

A few cooperatives separate revolving funds by major products, such as feed, fertilizer, and petroleum or by commodities in a marketing cooperative. Thus, benefits are returned according to each major product's savings rather than being comingled.

Another approach some local cooperatives use is to distinguish equity from their own operations from that received from other cooperatives. Such separate revolving funds show their members where the equity originated and provide a means for comparing local and federated performance—including equity redemption. (See section in chapter VII on federated cooperatives where this idea is explored in greater detail.)

It is common to incorporate features of the special plan into a revolving fund. In these cases, a high priority is placed on redemption in case of the member's death or other events affecting patronage. Adding these other features lengthens the regular revolving period. The shorter the revolving period, the less need for this additional feature.

Another possibility is separate redemption programs for each source of equity. An example might be per-unit capital retains on a base capital plan, net savings on a revolving fund plan, original paid-in capital on a special plan, and net savings from a federated on a percentage-of-all-equities plan. There is some logic to some of these linkages. The base capital plan is well adapted to per-unit capital retains; original paid-in equity is generally voting stock and often not a part of the revolving fund; and finally, the federated to which a cooperative belongs may pay on a percentage-of-all-equities plan.

Length of Revolving Period

The ideal length of a revolving period must be a trade-off or compromise between gaining necessary equity and equity redemption. In actual practice, revolving periods range from 18 months to more than 30 years. In a nationwide survey of agricultural cooperatives in the mid-fifties, the average revolving period was estimated to be a little less than 10 years³. About 20 years later, Brown and Volkin found in their nationwide study that the average length of revolving periods was 10.5 years—not much different from the earlier survey⁴.

However, those who have studied the subject recommend that revolving periods range from less than 5 years to 7 years⁵. This suggests that most cooperatives using the revolving fund need to take corrective action.

Short revolving periods keep investment more in line with patronage and reduce or eliminate the need for redeeming equities of estates out of sequence. To maintain short revolving periods and keep up with other demands on cash flow, cooperatives must have relatively large net margins, per-unit capital retains, or some other source of capital.

Another advantage of very short revolving funds is illustrated by Diamond Walnut Growers, Inc., of Stockton, Calif. Members invest capital retains set at 3 cents per orchard run pound delivered, amounting to 7 to 10 percent of crop value. The cooperative schedules its pool closing, fiscal year, and issuance of notices and cash payments to members, so that neither the cooperative nor the patron must pay income taxes until all per-unit capital retains and net margins are received in cash by the member. Their typical schedule is:

<i>Date</i>	<i>Action</i>
October 1978	Delivery of walnuts by grower.
June 1979	Fiscal year ends, 1978 pool is closed.
January 1980	Qualified written notice of allocation sent to members.
January 1981	Form 1099 sent to members, informing them of amount to be included in 1980 income.
April 1, 1981	All per-unit capital retains and net savings on 1978 crop are redeemed in cash.

Other cooperatives have been able to maintain revolving funds as short as 18 months⁶.

At the other extreme are cooperatives whose revolving funds are greater than 30 years⁷. Revolving cycles of many cooperatives have grown longer to accommodate their ever-increasing capital needs. Lengthened revolving periods, however, have produced dissatisfaction and disillusionment among directors, management, and members. Long revolving periods should be avoided, because they create problems for inactive members, distort ownership patterns, and violate cooperative principles.

Advantages

Factors that have resulted in the revolving fund becoming the most popular systematic redemption plan follow:

1. The revolving fund plan is easily understood and administered, and farmers know it best.
2. It maintains equities in proportion to use when revolving periods are relatively short.
3. It can be used to segregate capital into separate funds.
4. It provides a convenient way to increase equity or absorb a bad year by extending the length of the revolving period.
5. Active members can build up equity without direct cash investments.

Disadvantages

The revolving fund plan does not represent a financial panacea. Its drawbacks can be summarized as:

1. The length of the revolving period is too easily extended to meet increased capital needs or to cover poor operating results.
2. Disparities between benefits received and capital invested emerge in two situations: when margins vary substantially over time, and among products or services covered by the same fund.
3. Members often develop a false impression and unrealistic expectations and assume that their oldest equities will be redeemed on a fixed schedule regardless of the cooperative's financial condition.

Problems connected with revolving funds are not insurmountable. They generally can be overcome by educating members about how the plan operates and by careful planning in administering them.

Base Capital Plan

Some cooperatives have adopted the base capital plan to replace the revolving fund. In the base capital plan, (1) a base amount of needed equity for the cooperative is determined; (2) each member's share is based on proportional use of the cooperative during a base period; (3) equity requirements of the cooperative and of each member are adjusted, usually annually, to meet current needs of the cooperative; (4) underinvested members must add to their equity through a systematic basis; (5) those fully invested or overinvested will receive most or all of their current patronage refunds or per-unit capital retains in cash; and (6) overinvested equities may be redeemed several ways. The base capital plan is both an equity capital formation and redemption plan.

This plan is known by many other names—adjustable capital, adjusted balances, modified revolving fund, capital quota, capital investment, fair investment, capital credits, equity pool fund, capital requirement, permanent capital, and probably others. Actually, the plan emphasizes both developing a base amount of required equity and systematically adjusting it to the current needs of the cooperative and to patrons' use of the cooperative. Thus, a member's equity contribution is tied directly to use of the cooperative.

Some of the first cooperatives to adopt the base capital plan did so because of the Internal Revenue Acts of 1962 and 1966, which in many cases doubled tax payments for producers who were receiving old equities in cash and also accounting for current years' patronage refunds and retains⁸. In cooperatives using a revolving plan, members were required to report the total amount of the current year's patronage refunds as taxable income, whether paid in cash or in noncash qualified allocations. In addition, members were required to pay taxes on the cash redemptions of patronage refunds and per-unit capital retains apportioned in prior years, unless previously reported as taxable income.

The base capital plan allowed members to spread the tax burden over a longer period. Because most of these older equities have been accounted for since that time, the doubling-up tax problem is no longer a significant issue for cooperatives considering the base capital plan. But it has other important advantages.

The base capital plan was first used on the West Coast and in Florida among centralized fruit and vegetable marketing cooperatives. At least one federated grain marketing cooperative in the Pacific Northwest adopted a modified version of it. Only 2 percent of the marketing and supply cooperatives surveyed in 1974 indicated that they were using the base capital plan⁹.

Description of a Typical Plan

As mentioned, a primary objective of the base capital plan is to relate the member's investment to current proportionate use of the cooperative.

Therefore, if member A markets twice as much grain through the cooperative, pools twice the volume of vegetables, or buys twice as many supplies as member B, member A's investment in the cooperative should also be twice as much. This plan also relates the level of equity to the needs of the association and, when properly operating, provides the needed capital on an equitable basis. It also incorporates a formula to redeem the equity of those who are overinvested and those who are no longer patrons.

The basic features of a base capital plan can be described in terms of the steps that the board and manager usually would take in implementing it. They would:

1. Determine the cooperative's total capital needs for the coming year and for a long-range program and decide how much of this should be equity or net worth.
2. Determine the type and amount of allocated equity to be designated as base capital. The base capital may consist of equity acquired from direct investments, per-unit capital retains, or retained patronage refunds. Equity not included in the base capital may be in the form of preferred stock, unallocated reserves, or equity in other plans.
3. Calculate each member's proportionate share of the base capital to be provided and maintained in the cooperative. This is determined by the proportion of the cooperative's business the member did with it during a base period, usually the past 3 to 7 years.
4. Determine the amount each member is underinvested or overinvested based on current equity holding.
5. Determine the best way for generating needed capital from underinvested members and returning excess to overinvested members.

Determining a Member's Participation—Calculation of each member's proportionate share of the base capital to be provided and maintained in the cooperative is illustrated in table 3-3. A cooperative with five members and \$100,000 of equities at the end of 1980 may decide it needs \$110,000 of base capital for 1981 and that each member should have the base amount shown in table 3-3, based on the member's past 5 years of business with the cooperative. The difference between the member's current (December 31, 1980) equity and the base requirement is the amount each is overinvested or underinvested. Members A and B were underinvested a total of \$20,000; member C's equities were in exact relationship to patronage; and members D and E were overinvested a total of \$10,000.

The second half of the table shows the adjustments necessary if members' equities are to be proportionate to their patronage. Most cooperatives, however, would not be able to accomplish these adjustments in 1 year. Some members, especially new or young ones, would not be able

Table 3-3—Example of current and required equity capital and necessary adjustments in a base capital plan

Member	Share of needed equity ¹	December 31, 1980			December 31, 1981		
		Allocated equity capital			Retain or refund added	Equity redeemed	Current base
		Current base	Required base	Over or under ²			
		<i>..... Thousand dollars</i>					
A	18.2	5	20	-15	15	0	20
B	20.9	18	23	-5	5	0	23
C	18.2	20	20	0	0	0	20
D	18.2	22	20	+ 2	0	2	20
E	24.5	35	27	+ 8	0	8	27
Total	100.0	100	110	-10	20	10	110

¹ Calculated by dividing each member's patronage by the cooperative's total patronage for the base period.

² Based on the past 5 years of patronage, members A and B were underinvested a total of \$20,000; member C's equities were in exact relationship to patronage; and members D and E were overinvested a total of \$10,000.

to provide their full share this soon. Others might have such large over-investments that the cooperative could not redeem them in full in 1 year. Each cooperative has to develop policies to fit its needs as indicated by examples described later in this section.

If the cooperative obtained member capital from per-unit retains, these would be deducted from proceeds of members A and B in 1981 but likely no additional deductions would be made from C, D, and E. If deductions were made from them, all amounts would be returned at year's end. If the cooperative declared patronage refunds, the noncash portions from members A and B would be added to their current equities up to their base requirements. All the refunds for members C, D, and E would be paid in cash.

Setting Length of Base Period—A major decision to be made by the board of directors is the number of years of production and marketings, or sales history, to use in determining each member's patronage base period. A short-term period, such as 2 to 4 years, will reflect changes in price structure more quickly. A shorter base period will keep investments more in line with changes in patronage and reduce or eliminate the need for redeeming estates out of sequence. A long period, such as 10 years, will tend to even out fluctuations in a member's required base or in capital demands but will not be sensitive to dramatic changes as seen in the

grain industry in 1973. But neither will it be as sensitive to changes in patronage. A number of cooperatives are using the average of the past 5 years for their base. Information on eight associations in 1974 showed that three were using a 3-year period, two were using 5 years, and one each was using a 6-, 8-, and 10-year period.

Although the length of the base period will affect both how quickly members build up their proportionate share of the net worth and how quickly they receive equity redemptions, these movements are more a function of the association's ability to generate net margins or capital retains. Even if a 3-year moving average is used to calculate equity investment, the level of new investments may not increase sufficiently to pay off those having the highest redemption priority, unless the association realizes sufficient net margins during those years. Therefore, many base capital plans use per-unit retains rather than allocated net margins to attain a more stable source of financing.

Deciding on a Unit for Calculating Equity—Many cooperatives use a physical unit of the commodity delivered to or received from the association to determine each member's equity participation. For an apple-packing cooperative, the common denominator probably would be a packed box; for a grain cooperative, a bushel or hundredweight; and for a fruit and vegetable processor, a ton of product delivered. North Pacific Grain Growers, Portland, Ore., for example, uses a base equal to 8.57 cents a bushel on the average volume its member locals marketed over a recent 5-year period.

For a supply cooperative, it could be a ton, gallon, or dollar of supplies sold to members. The objective is to find a common denominator, ideally a unit commonly used by the industry, to measure the proportionate use of the facility by each member and to determine the members' investment level in the cooperative.

One problem, however, in using a physical unit of measurement is that it does not reflect other cooperative services or the change in values per unit. For instance, many grain cooperatives found their level of equity capital was adequate when wheat sold for \$2 per bushel. But when the price rose to \$4, the cooperative was undercapitalized and needed more funds to operate, even though it was receiving the same number of bushels as it had in previous years. This problem could be solved by indexing the per-unit capital retain according to an appropriate price level series.

Another simpler solution many cooperatives now use is a measurement that reflects the value of the units measured rather than just the number of units. The measurement could be the dollar value of proceeds, sales, or a percentage of a given measurement. For instance, a member's required equity base might be 150 percent of the average raw product value of a member's deliveries to a fruit or vegetable pool, or 130 percent of the average purchases of farm supplies during a specified period. As an example, Agripac, Inc., Salem, Ore., now uses a base equal to

128 percent of the average economic value of the past 5 years' deliveries of product for processing.

Cooperatives with large investments in processing facilities may require more assets to be used in manufacturing one type of product than another. For example, CF Industries, Long Grove, Ill., decided to calculate its base capital on "assets employed" rather than on members' use based on patronage refunds. This includes all assets; it does not have equities in other cooperatives. CF believes this plan results in more equitable financing. (See appendix B.)

Determining Equity Retirement Priorities—Each association must determine what special payment schedule, if any, it expects the program to provide for estates, retired members, and others overinvested. Because of the flexibility of the base capital plan, the priorities for retiring capital can be suited to any individual situation. Usually the shorter the base period, the less need there is for special plans.

Many associations have determined that estates, retired farmers, and other inactive members will be revolved out on the same basis and that no priorities will be given to any special category. In some instances, a separate account is established for estates, and these are retired on a different basis. Others have decided to pay out estates in a given number of years, or year, and redeem all other overinvested equity on the basis of a moving average.

Limiting Annual Equity Investments and Redemption—Many members, especially the newer ones, may have relatively little equity in their cooperatives. To build up their required capital within a short time may cause hardship. Some cooperatives, therefore, limit the amount such patrons are expected to provide in a single year. For example, Agripac limits the amount patrons must provide in a single year to 15 percent of the value of their products marketed in the past year. North Pacific Grain Growers requires a new member cooperative to pay in cash a minimum of 10 percent of the member's base capital requirement. A northwestern cherry marketing cooperative permits a new member to make a full investment share over a 10-year period but uses members' latest 5-year production period in calculating their base capital requirements.

As to redemptions, some cooperatives may not have sufficient funds to redeem all excess equities in one year, so they establish a limitation. In Agripac this is 12 1/2 percent of the total each year, which means such equities are redeemed in 8 years. A citrus cooperative in Florida designates a minimum of funds that can be used to redeem eligible capital retains; in other words, an amount equal to 5 percent of any gain in the cooperative's annual increase in net worth.

Most programs leave the decision about limitations to the discretion of the board, which is expected to exercise prudent judgment that reflects the circumstances at the time.

Formulas for Retiring Equity Capital

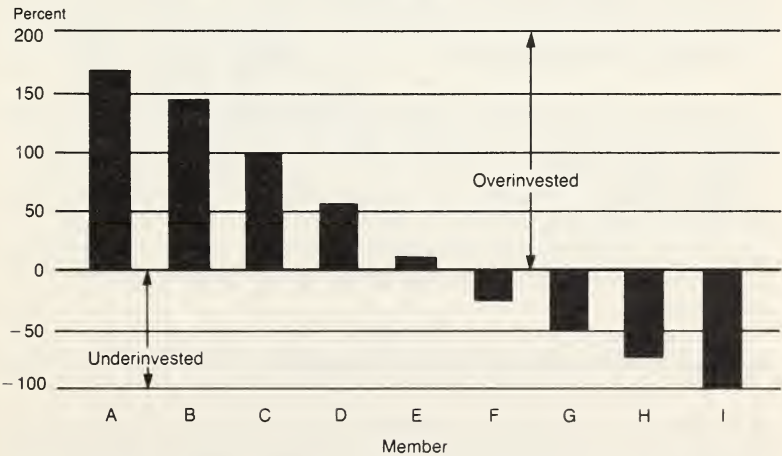
Decisions regarding level of capitalization, unit of measurement, average volume, and retirement priorities can be incorporated into a formula that spells out the intended capital retirement program. This is more easily explained by using graphs to reflect each member's proportionate investment.

In figure 3-1, the vertical axis represents the percentage that actual investment of nine members is over or under their required investment. The solid 0 horizontal line extending across the chart about halfway up the vertical scale represents the required or optimum level of investment for each member. That is, if members' investments were directly proportionate to their volume through the cooperative and sufficient refunds or retains had been made to allow them to accumulate their respective quotas, then all members' investments would be at that level—the 0 horizontal line.

This line would equal a specific measure such as 40 cents per bushel, or \$30 per ton, or 150 percent of equivalent value, or \$3 per \$100 of sales. But in any event, it would represent that member's proportionate base capital investment in the association. The vertical line does not indicate the absolute dollar value of members' investment, but rather the percentage that their investment is over or under their pro-rata share of equity.

Figure 3-1

Proportionate Investment of Each Member in Cooperative



Any cooperative that analyzes the investment of its members in this manner would probably find, as shown in the example, that many members would be overinvested; and many others, underinvested.

With the priorities of new investments and redemptions identified, the next step is to determine an equitable and workable method to bring overcapitalized members more nearly in line with their proportionate share, while requiring undercapitalized members to increase their investment in a reasonable manner.

“Most Overinvested Members” Approach—One method would be to determine at the end of the fiscal year how much funds are available to retire capital after the cash patronage refund has been paid, and then calculate how much of the most overinvested members’ equities can be retired. A line would be drawn at the lowest percentage that funds available for equity retirement would allow, which would parallel the required or optimum investment line, as shown in figure 3-2.

The second year, a second line could be drawn slightly below the first cutoff line, bringing those with the largest overinvestment even more in line with other producers, as shown in figure 3-3. In the meantime, those in an underinvested position would continue to accumulate deferred refunds or capital retains and not share in any equity redemption until they reach the required level. The board could stop any additional investment at the optimum line or allow investment to continue until it reached the lowest cutoff level attained thus far.

“All Overinvested Members” Approach—A second approach is shown in figure 3-4 in which all overcapitalized members receive part of the capital retirement.

The amount each member will receive is determined by multiplying the percentage rate of the current retirement, by the percentage of the overcapitalized position, times the amount of equities the individual owns, weighting the retirement in favor of those who are most overcapitalized.

A variation of this approach would be to additionally weight the calculation by the percentage of overcapitalization; this would result in a payment pattern resembling the chart in figure 3-5. Although both of the approaches shown in figures 3-4 and 3-5 require more calculation to determine the respective amounts to be retired, the effect is shared by more of the members than the approach shown in figures 3-2 and 3-3 and probably would have some advantage from a member relations standpoint.

Application to Retired Members and Estates

If a cooperative decides that a retired member’s equity should be redeemed on the same basis as an active member’s overinvestment, the following example illustrates how the retired farmer’s capital would be redeemed.

Figure 3-2

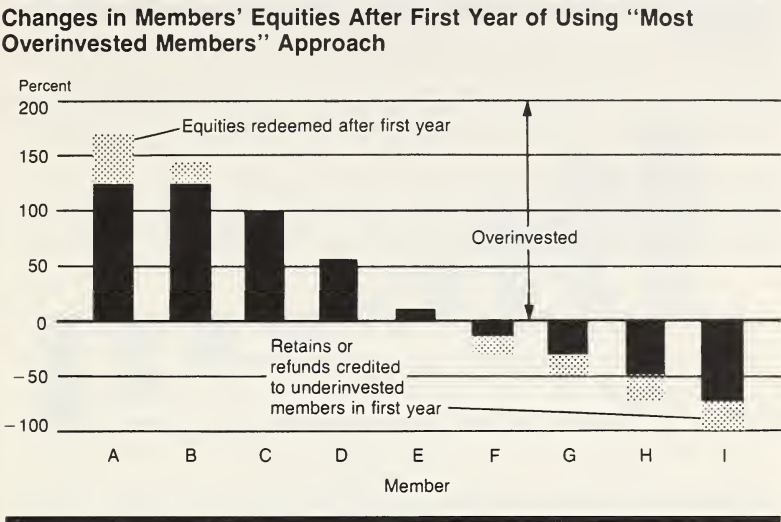


Figure 3-3

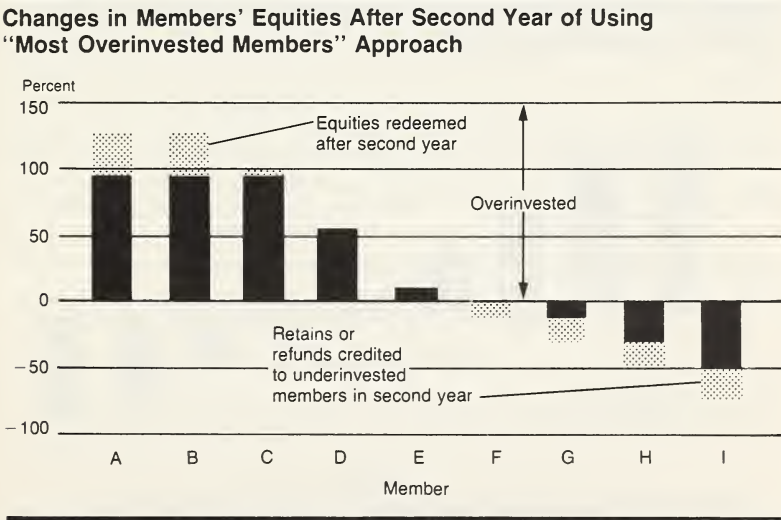


Figure 3-4

Changes in Members' Equities Using "All Overinvested Members" Approach

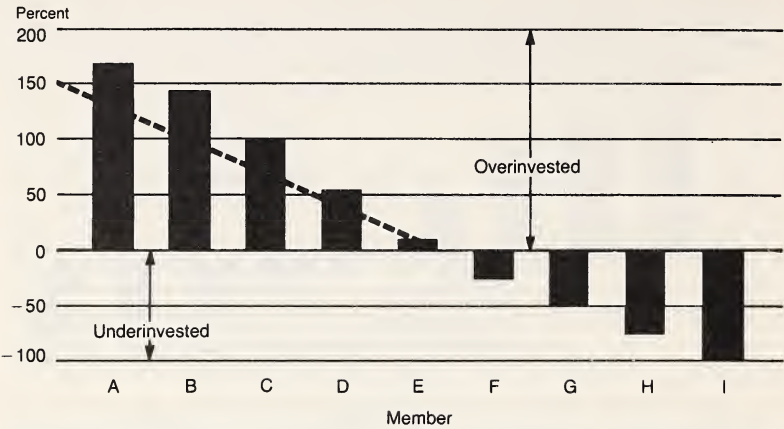
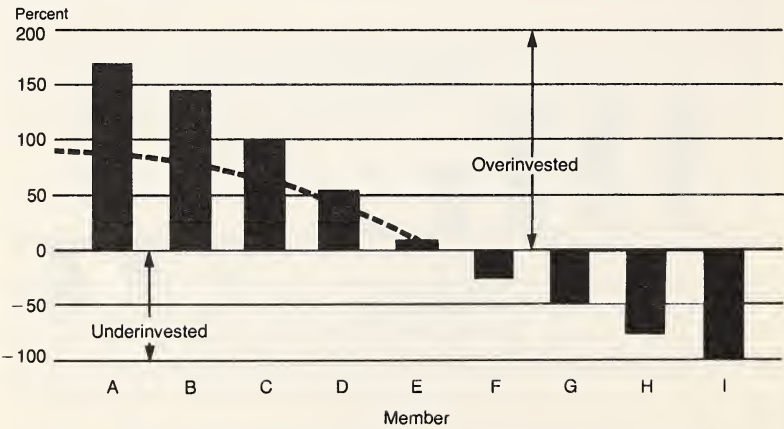


Figure 3-5

Changes in Members' Equities Using "All Overinvested Members" Approach on a Weighted Basis



Using figures 3-6 and 3-7 and assuming a moving 3-year base period, member G, who to this point had been underinvested, decides to retire, and at the end of the next fiscal year, G's investment is recalculated. Because G had not delivered a crop during the past harvest, only the two previous crops are used in calculating his average volume on a 3-year basis. Therefore, G's capital requirements are only two-thirds of the level that had been required the previous year.

As seen in figure 3-7, member G is now overinvested. By the following year, member G's overinvestment has increased again, and by the third year, the entire investment remaining is paid in cash. Obviously, a longer moving average would result in a slower equity payout.

The same principle would apply to an estate which, if left to the mechanics of the program, would be due for payment over a period of time determined by the board of directors. Some boards have decided that estates will be paid before any other capital retirement. In other cases, estates have been arbitrarily based on a 2- or 3-year moving base, regardless of how the calculation for retired or active farmers is determined. (These comments assume no conflicting laws in the jurisdiction in which an estate is probated. See section in Chapter VI on equity redemption laws.)

Advantages

Before any cooperative adopts a base capital plan, it should ascertain first whether such a plan will provide a better solution to the problems facing the association and whether it will meet the objectives of a good capitalization program. The following are some of the main advantages of this plan:

1. It links more equitably and directly members' shares of investment in the cooperative to use of the cooperative. Also, it provides a system for regularly adjusting a patron's investment to maintain an equitable ownership structure.
2. It adapts to changing conditions and allows a cooperative to fit the plan to its individual needs. When factors such as price increases require more capitalization and a recalculation of individual investments, the plan expands or contracts capital as needed.
3. It allows an orderly transfer of ownership from past users to new members.
4. It provides the flexibility to tailor the retirement of capital to the particular needs of the association.
5. It places the member's investment in the cooperative in proper perspective. These funds no longer represent retains or earnings kept from members, but an actual investment related to use of the cooperative.

Figure 3-6

Status of Member G's Equities Before Retirement

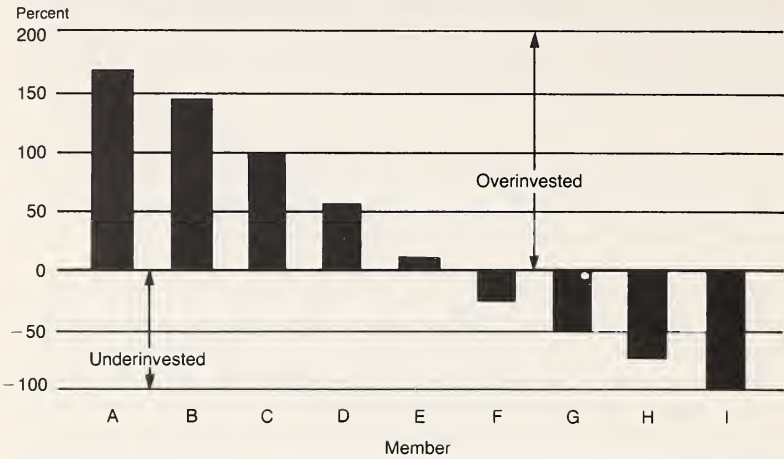
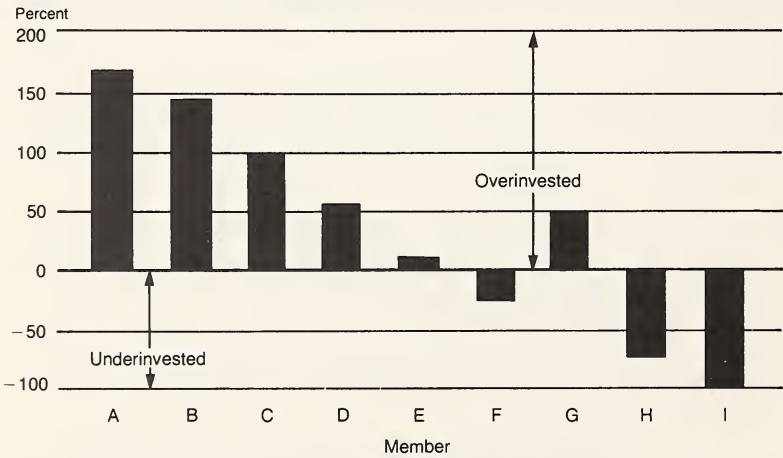


Figure 3-7

Status of Member G's Equities After Retirement



6. It allows the board and management to do a more accurate job of budgeting and funds flow forecasting, because capital sources are more predictable and reliable especially if capital retains are used. Some managers have expressed the feeling that for the first time they were in a position to manage the capital structure rather than being managed by an automatic application of the historical capital retain.

7. It permits many established farmers to receive a greater percentage of their patronage refunds in cash, even though they are still current producers and would not necessarily receive these benefits if the cooperative were operating on other plans. Also, the base capital plan permits new members, once their equity reaches the required level, to receive a larger percentage of their current patronage refunds in cash.

Disadvantages

1. New members, especially young farmers, are unable to promptly provide their capital requirements.

2. Some boards hesitate to increase equity requirements to meet increasing capital needs, because they are reluctant to ask members for increased contributions. They find it more difficult to raise the rate per unit than to lengthen the revolving period (as when a revolving fund plan is used).

3. The plan does not work as well when a large and constant turnover of members or farm ownership occurs.

4. Problems can arise when the base period is short, such as 3 years, and poor crops occur in 2 of those years.

5. The plan is complex and may be hard to understand.

Some boards hesitate to set specific capital requirements that members and competitors can relate to units of products marketed or supplies purchased. Therefore, to some extent, because of psychological reasons, some boards set member requirements as a percentage of the value of products marketed or supplies sold to the cooperative.

Cooperative officials say that most of the problems with the base capital plan are caused by breakdowns in communication. The board and manager need to develop written material that clearly describes the plan as simply as possible.

Custom Designing the Plan

The variations of the base capital plan now in use indicate its flexibility; it can be custom designed for almost any cooperative. This is an advantage for cooperatives considering changing their present equity plan.

Generally, it is advisable for bylaw provisions and board policies (such

as length of base period, method of calculating base, and rate of accumulation and redemption) regarding base capital plans to be flexible to give the board a range within which to operate. (See appendix C for sample bylaw provisions for a base capital plan.) This will aid future boards in making changes when conditions warrant.

The flexibility of the base capital plan thus enables cooperative officials to custom design it to their situation, priorities, or preferences. It is important to understand, however, that changing from one equity plan to another does not correct a problem of inadequate margins or retains. A positive cash flow is necessary to make any capital program work, and if a low or negative cash flow is the primary cause of discontent with the existing program, then the cooperative must first face this problem.

Special Adaptations

Variations discussed earlier in this section included those pertaining to the unit of measurement for calculating the base; length of moving average; limit on contributions by a member in any 1 year; limit on the percentage of equity that will be returned to members in any 1 year; and policies for redeeming equities of overinvested members, estates, and retirees. A few other adaptations or variations follow.

Advance Capital Required from New Members—Some cooperatives may require a new member to provide advance capitalization equal to his or her expected share of the cooperative's capital or a portion of it. This might be in the form of a substantial amount of capital stock or capital credits that would relate to a specified percentage of the value of an annual crop or use of the cooperative. This advance capital would reflect the premium placed on participation in that cooperative's services and would help the cooperative redeem the equity of overinvested members.

Exchange of Equities by Members—Exchange of allocated equities is most prominent among cooperatives with base capital plans. Usually, the sale must be approved by the board of directors and can be made only to other active members of the cooperative. In some cases, only overinvested members can sell and only underinvested members can buy equities. (This concept is discussed in greater detail in Chapter IV.)

Linkage Between Investment and Patronage Rights—One adaptation of the base capital plan is linking patronage rights to equity investment. Ownership of a specified share of equity entitles the member to market or purchase an established amount of product. This means that, to use the cooperative, members must provide their full share of equity. With this form of financing, the tie between use of and investment in a cooperative is direct and unambiguous. It places the responsibility immediately on the member according to anticipated use. A new cooperative receives its initial member financing in an equitable manner from the beginning.

The most common examples of direct investment linkages occur among cooperatives with high equity requirements and who are also new or have unique access to markets or supplies on which members place a premium. These include sugar beet refining, sugarcane crushing, vegetable processing, fruit packing, and grain drying and storage.

American Crystal Sugar Co., a sugar beet processing cooperative organized in 1973 to acquire an existing private company of the same name, is an example. Prospective members were required to sign an acreage contract that included an investment requirement of \$105 per acre. This amount was calculated by dividing the equity needs of the cooperative by the acres of sugar beets that could be handled by the processing plants. A farmer without a contract and the associated investment was not entitled to market sugar beets through the cooperative.

A fertilizer manufacturing cooperative, CF Industries, Inc., also has established purchasing rights linked to a tonnage investment by members. The investment required for each type of fertilizer is determined by its respective physical capacity and investment in plant and equipment. (See discussion of CF's plan in appendix B.)

Northern Pacific Grain Growers, Portland, Ore., goes one step further. It applies a 5-year average of the total grain receipts from its local member cooperatives—not just their shipments—to the federated cooperative. The locals understand that if they are to have the services of their regional cooperative in bad as well as good times, they will have to provide equity capital based on their total potential volume.

The ability to transfer patronage rights is important for cooperatives with patronage rights linked to investment. (See chapter IV where this topic is discussed.) Planned volume will be received only if equity is held by active members. Members favor transfer or sales opportunities, because inactive members can sell their equity, and active members can more readily use their investment as collateral in obtaining loans. Transfer rights also facilitate the initial sale of patronage rights.

Once the initial equity has been obtained, direct linkage financing can produce problems when it fails to adapt to the cooperative's continuous need to grow. Cooperatives starting with direct linkage financing often change to more traditional financing methods of retained patronage refunds and per-unit capital retains to finance continued growth. This results in a dual method of financing—base capital from direct investments and allocated equity from patronage, with the latter becoming more important.

Cooperative cheese and fluid milk processing cooperatives followed this pattern of development. Initial required per-cow investments often were relatively small. As these cooperatives expanded and consolidated, they eventually dropped this method of financing. It seemed more convenient to acquire equity via patronage than direct investment.

Variable Cash Refunds—Different levels of cash patronage refunds are issued, depending on the level of members' investment. Higher levels of cash patronage refunds are given members whose investment in the cooperative approaches their share of needed equity; the most underinvested members receive the lowest level. Thus, members are rewarded for their level of investment.

Depending on the schedule on which the level of cash refunds is based, as members' investment approaches their required equity, their rate of investment slows. This extends the time, particularly for a member with expanding patronage, required to reach full equity investment. It does, however, increase members' benefits as their equity investment approaches the required base. This may be an important member relations consideration. However, variable cash refunds should not be used instead of redeeming equities of overinvested patrons.

Indiana Farm Bureau Cooperative Association (IFBCA) includes a variable cash refund in a comprehensive cash refund-equity redemption program developed for its member cooperatives. Within the basic framework, member cooperatives decide on the length of base period, the percentage of overinvested equity to be redeemed, redemptions in special situations such as estates and small equity accounts, and level of cash refunds. This plan is a rare example of local grain and supply cooperatives using a base capital plan. (Appendix B briefly describes and numerically illustrates the IFBCA plan.)

Union Equity Cooperative Exchange, a federated grain cooperative, relies on a variable cash refund plan to adjust the equity ownership of its members. Its plan has four levels of cash refunds—from 20 to 100 percent. When a member cooperatives' investment in the federated cooperative equals or exceeds its share of the projected equity base, it receives 100 percent cash patronage refund.

This cooperative's variable cash refund plan is as an alternative to redemption of overinvested but still active members. Only the equity of cooperatives no longer eligible for membership are redeemed. All adjustments between a member's investment and use of the cooperative are made by the different levels of cash patronage refunds. Underinvested members receive a lower level of cash patronage refunds and have a higher proportion of their patronage refunds added to their investment base. (Union Equity's plan is described in appendix B.)

With a variable cash refund plan, the schedule of cash refunds can be tailored to the cooperative's objectives. For example, the IFBCA plan is used in combination with an equity redemption plan and, therefore, the range of cash refunds is limited. In the example discussed in Appendix B, the local cooperative adopted a schedule that varied only from 25 to 35 percent cash patronage refunds. In contrast, the range of cash refunds of Union Equity extends from 20 to 100 percent. A variable cash refund plan causes equity adjustments only among active members, because inactive members receive no patronage refunds.

A federated cooperative with a stable membership and expanding equity needs may be able to maintain an equitable financing plan among its members with a variable cash refund plan. However, a cooperative with a changing membership could not rely on a variable cash refund plan alone to maintain equitable financing. It would need a redemption plan to redeem equity of inactive members.

Variations in Concepts—Some of the names or terms by which the base capital plan is known indicate its variations. For example, some emphasize that it is adjusted, as contrasted with revolved, each year. Others refer to base capital as “permanent” or nonrevolving capital of active members—at least until changes in their patronage or the cooperative’s capital needs necessitate a change in their requirements. (Therefore, the term “permanent” is not entirely appropriate. Also, use of permanent equity in this sense should not be confused with unallocated reserves.) Adjustments are made periodically, although not necessarily annually. Some cooperatives also have revolving funds to supplement this base capital.

Still other capital stock cooperatives that require a uniform and substantial amount of stock per member, such as \$300 to \$3,000, look upon this as base capital. The amount per member is seldom adjusted, unless additional capital is needed for new facilities or expanded services. Many members may patronize the cooperative for many years, so stock and other equities are seldom redeemed. These cooperatives may establish a reserve for redeeming the stock of estates and members who move or cease farming.

Percentage-of-All-Equities Plan

Another way of redeeming members’ equity is to retire a specified portion of outstanding equity without reference to date of issue or share of equity provided. The historic evolution of this plan is obscure. However, Rural Electrification Administration recognized this program in 1964 as an alternative to the revolving fund¹⁰. Only 2 percent of all farmer cooperatives report using this method¹¹. It has been the primary redemption program used by CENEX, a federated farm supply cooperative at St. Paul, Minn., and a few of its members. Percentage-of-all-equities has also been used in other parts of the country such as Colorado¹².

Description of Plan

A cooperative first determines the percentage of total allocated equity to be redeemed. This percentage is used to calculate the amount redeemed for each patron. Assume, for example, that a cooperative had \$20,000 from net savings available for redemption to be applied against allocated equity of \$400,000. Thus, 5 percent of every member’s allocated equity would be returned in cash, regardless of date of issue or share of equity held.

The effects of this plan on an individual member are illustrated in table

3-4. In the first patronage year, the member received \$250 in patronage refunds—\$50 or 20 percent in cash and the balance (\$200) retained as “new equity” by the cooperative. Because the cooperative computed the amount to be redeemed on the beginning balance, no equity was redeemed the first year of patronage. In the second year, \$237 of new equity was credited to the member’s account.

The cooperative realized \$370,000 in net savings and decided to apply \$150,000 of this amount to equity redemption. This represented 6.86 percent of its \$2,187,000 of allocated equity subject to redemption. Therefore, the member received \$14 in equity retirement, leaving an ending balance of \$423 for the second year.

In the member’s 20th year, the association redeemed 7.81 percent, because net savings were relatively large. However, the following year, net savings plummeted. But by using this method, the cooperative still was able to maintain its policy of annually redeeming members’ equity—although at a lower rate of 1.17 percent.

In the 22nd year, the member became inactive. Thereafter, the member would continue to receive the percent retirement established by the cooperative’s board of directors, until some other event or policy triggered redemption of the balance. This may be when the member reached a certain age or died, or the board decided to redeem the equities of inactive members after a given period of inactivity. This balloon payment would be necessary to clear the account or it would never be completely redeemed.

Most adaptations of the percentage-of-all-equities plan accelerate or de-emphasize benefits to current patronage. This can be done by computing redemption on the intermediate total in table 3-4 rather than the beginning balance or by making new equity ineligible for redemption. It also can be combined with other programs on a systematic basis. As previously mentioned, it must be augmented by another plan to clear all equity of an inactive member.

Advantages

Favorable aspects of the percentage-of-all-equities plan may be summarized as:

1. It encourages new patrons to patronize the cooperative, because their equity is redeemed at the same rate as that of older or inactive members. New members do not have to wait as long to receive redemptions.
2. The plan is easy for members to understand.
3. Management is given a plan that is simple, flexible, and easy to administer. Redemptions are adjusted readily to different operating results. Annual redemption is not a predetermined amount based on historically allocated sums but is determined according to the cooperative’s current

Table 3-4—Illustration of percentage-of-all-equities plan for a member

Patronage year	Beginning balance	New equity	Retired		Ending balance
			Percent	Amount	
	.... Dollars .....			..... Dollars	
1	0	200	5.00	0	200
2	200	237	6.86	30	407
3	407	350	4.00	16	741
.
.
.
20	2,560	372	7.81	200	2,732
21	2,732	63	1.17	32	2,763
22	2,763	0	5.00	138	2,625
.
.
.

year's net savings and capital requirements. For this reason, it would be better adapted to cooperatives that must rely on retained patronage refunds as the major source of capital.

4. It avoids the criticism that members must die before their equities are redeemed, often leveled against special plans and revolving fund plans with long revolving periods.

5. It provides a basis for charging full margins to generate necessary cash flow. Members can visualize readily how generous margins for the cooperative will be returned.

6. This plan works reasonably well for federated cooperatives in which membership is perpetual and whose relative share of patronage may not fluctuate significantly.

Disadvantages

Drawbacks to the percentage-of-all-equities plan can be summarized as:

1. It extends the time required to transfer ownership from overinvested and inactive members, because redemption is spread out over all allocations.
2. Members' equity contributions are relatively unresponsive to changes in patronage. Thus, it takes new members longer to reach their equitable level of equity contribution.
3. When estate payments are given priority, the percentage of equity that can be retired decreases, extending the time that inactive members must

wait before receiving their investment.

4. The plan must be combined with other plans to handle inactive members or they won't receive all of their equities.

5. The plan appears to be least well adapted to local cooperatives, particularly if membership is mobile, and patronage is relatively erratic.

Special Plan

A special plan is one by which a specific event or condition, such as death of a member, triggers equity redemption. By far the most common plan, it is the only one 39 percent of the cooperatives used and it is used in conjunction with other plans in another 20 percent¹³. It is not known to what extent this high level of use reflects planned redemption or is a last ditch effort to do something¹⁴.

Several events and conditions that trigger equity redemption are, in apparent order of use: (1) death, (2) no longer farming, (3) retiring or reaching a specified age, (4) on call by the patron, (5) hardship including bankruptcy, (6) moving from the trade area, (7) resigning membership or no longer patronizing the cooperative, and (8) applying equity to uncollected accounts receivable (table 3-5). Another option is for the board to consider requests for redemption on a case-by-case basis rather than to specify the priorities in advance.

In a special plan, new equity is accumulated and held by the cooperative until the prescribed condition is met (table 3-6). Upon verification of the condition and after the other administrative work, including approval by the board is completed, the entire amount of equity is redeemed at one time or over a period of years. In the example illustrated in table 3-6, the patron accumulates one unit of equity per year during 40 years of active membership. No equities are redeemed until a specified condition is met (5 years after patronage ceases in the example of table 3-6).

The combinations of specific events used, time elapsed between event and redemption, and method and limits on payment vary widely. Practices range from using only one event such as death to using several. As many as five of the events listed in table 3-5 as qualifying for redemption have been observed in one cooperative. The cooperative may establish an upper limit on total redemption to be made annually and then redeem equities according to a predetermined set of priorities. Equities may also be redeemed in cash or converted to interest-bearing securities, at face value or at a discount.

The board may need to establish policies that define the conditions for redemption to guide members and management. For example, if equities of members who move from the trade area are to be redeemed, the board must decide the boundaries of the trade area and whether the moves are permanent. If two or more events are used to trigger redemption, the board also should establish a policy regarding which conditions

Table 3-5—Frequency of use of events used to trigger redemption of equities by local and centralized farmer cooperatives that used only special plans.

Event	Role of equity redemption in event ¹	Type of cooperative			
		Marketing	Farm supply	Service	All
<i>Percent</i>					
Estates	(1)	57	51	50	54
No longer farming . . .	(1)	24	13	30	19
Age	(1)	10	10	—	10
On call	(2)	5	13	10	9
Hardship	(1)	2	5	—	3
Other:		2	8	10	5
Moved from trade area	(1)				
No longer patronizing co-op	(2)				
Member resigned . .	(2)				
Apply to accounts receivable	(2)				
Case by case	n/a				
Total		100	100	100	100

¹ Authors' judgment regarding potential role that short-run benefits from equity redemption may play in prompting the event:

(1) Events over which the member has no control or potential benefits from equity redemption are unlikely to be major factors in the member's decision.

(2) Events that the member can control and short-run benefits from equity redemption may be a major factor in the member's decision.

Source of data: Brown and Volkin, p. 11.

would result in earlier redemption, if funds are limited.

Planning for Cash Flow Requirements

With the exception of age (which also may be unpredictable because members' birthdates usually are not in most cooperatives' records), special conditions involve unpredictable amounts of equity, thus introducing another barrier to financial planning. This weakness can be minimized by compiling records of the probability of the occurrence of each condition and the corresponding equities involved. Using this data as a basis, plans can be made to provide the necessary cash flow. Some events may be cyclical and/or related to the local agricultural economy.

The following example¹⁵ for redemption of equity owned by estates illustrates the type of information and procedure that could be used to

Table 3-6—Illustration of special plan for an individual member

Year	Equity			
	Beginning balance	New	Redeemed	Ending balance
	<i>Dollars</i>			
1	0	1	0	1
2	1	1	0	2
3	2	1	0	3
4	3	1	0	4
5	4	1	0	5
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
40	39	1	0	40
41	40	0	0	40
42	40	0	0	40
43	40	0	0	40
44	40	0	0	40
45	40	0	40	0

Assumptions:

1. New equity may be generated from retained patronage refunds, per-unit capital retains, and/or cash investment and is equal to \$1 each year for simplicity.
2. Patronage lasts for 40 years.
3. Special condition is met and redemption takes place in the 45th year.

plan for special retirement. Three kinds of information are necessary to plan for estate retirement: (1) an equity profile showing the equity owned by different age groups and artificial person members—partnerships, corporations, and other cooperatives; (2) a mortality rate schedule; and (3) a flow of funds statement. Columns 1 and 2, table 3-7, show an equity profile, where the members' age is linked to the amount of equity they own. Column 3 shows the probability of death (taken from a mortality rate schedule¹⁶). Mortality rate schedules that most closely represent the membership's race and sex composition should be selected. Probable equity retirements (column 4) are calculated by multiplying column 2 by column 3. In this example, equity calculations for equity retirement to corporations, partnerships, and cooperatives are based on the average mortality rate or the average equity turnover of natural person members. A total of \$12,761 would have been provided for estates. Redemption for other events, such as moving, would have to be added to this total. A 5-year estimate should be developed for financial planning purposes.

Table 3-7—Illustration of estimating equity redemption due to death

Age of members	Equity owned	Probability of death requirements	Probable equity retirement
<i>Years</i>	<i>Dollars</i>		<i>Dollars</i>
15 - 36	24,600	.002	49.20
37 - 40	27,200	.003	81.60
41 - 45	53,000	.005	265.00
46 - 50	53,600	.008	428.80
51 - 55	58,000	.012	696.00
56 - 60	53,600	.020	1,072.00
61 - 65	50,000	.030	1,500.00
66 - 70	33,200	.044	1,460.80
71 & over	62,000	.100	6,200.00
Total	415,200	² .028	11,753.00
Corporations	22,000	² .028	616.00
Partnerships	12,000	² .028	336.00
Cooperatives	2,000	² .028	56.00
Unknown Ownerships ¹	32,000		
Net outmigration	415,200	³ .017	7,058.40
Grand total	\$483,200		\$19,819.80

¹ In some cases where records were not kept, were lost, or where members cannot be located, ownership of equity cannot be determined.

² Based on the average rate of retirement of equity to individual members or $\$11,753.40 \div \$415,200.00 = 0.028$. At this rate, equity would turn over every 36 years.

³ Net outmigration was estimated from net decline in farm members in the State.

Source: Scofield and others, p. 14.

Special Adaptations

Applying death and age conditions to members other than natural persons is an awkward, even unfair situation. Their continuous lives discriminate against such institutions as schools, universities, and government agencies, as well as partnerships, trusts, incorporated farms and businesses, and other cooperatives. Equity turnover for natural persons is faster, with only liquidation prompting redemption to other members. After a period of time, institutions would hold more than their proportionate share of equity.

Lake-to-Lake Cooperative in Wisconsin found one way to reduce the problem. This cooperative redeemed a proportion of the equity held by a corporation equal to the proportion of the corporation's equity held by individuals meeting redemption criteria. For example, if a natural-

person stockholder died owning 30 percent of the incorporated member's stock, that incorporated member could receive 30 percent equity in cash. Normally, the cash would go directly to the stockholder on a pass-through basis.

Partnerships could be treated as a member, with the partnership's equity retired in proportion to a partner's share of the partnership's business. Some see this approach as potentially dangerous to the cooperative. They argue that a natural-person stockholder with a terminal illness could increase his or her equity in an incorporated member and thus expose the cooperative to exaggerated redemption obligations. In any case, this approach does not provide a means by which a cooperative can redeem equity held by organizations such as government agencies and other public institutions or corporations that have large numbers of stockholders or that are owned by other corporations.

Agland Industries of Eaton, Colo., uses another way to reduce discrimination; their plan accommodates all nonnatural-person members. This cooperative redeems the same percentage of their equity as was redeemed for the natural-person members as a whole. For example, if in 1 year, 4 percent of the equity of natural-person patrons was redeemed because of death or age, 4 percent of the equity of corporate members would be redeemed in that year. Some cooperatives have reissued equities of liquidated incorporated members directly to their stockholders.

Advantages

The advantages and disadvantages of special plans and their impact on different classes of members depend on the conditions employed.

1. Generally, for the cooperative, the financial burden of special plans is light compared with other redemption plans, because only amounts resulting from specific conditions are redeemed. Consequently, these programs place a relatively small equity burden on new and rapidly expanding members.

2. Special plans, particularly those based on death and age, are easily understood. They also appear logical and are generally popular with members¹⁷.

3. These plans provide a safety valve for high priority cases (for example, estates) when systematic plans are not in place or not functioning as intended or during periods of financial stress.

4. Special plans may be well adapted to cooperatives that pass most of their monetary benefits to patrons immediately in the form of favorable prices. In such cases, the cooperative can only, at best, carry a relatively light redemption program.

5. Situations requiring a simple and easy-to-understand program together with limited redemption requirements in early stages of development may

also find the special plan advantageous, at least in the short run. Redeeming equities under this plan may not be equitable, but apparently, some members are not greatly concerned about this aspect. Hence, many boards and managers believe the member relations advantages outweigh the disadvantages of such plans.

Disadvantages

For several reasons, cooperatives may want to avoid using the special plan, except during periods of unusual financial stress or when they pass most of their benefits on in the form of favorable prices.

1. It fails to meet the "financing-according-to-use" test. While members may provide capital based on use, it is not redeemed as patronage declines. Also, capital is not redeemed when patronage ceases, except in the few cooperatives whose plans provide for this.
2. With the exception of age, special events triggering redemption are unpredictable and involve unpredictable amounts of equity, complicating the cooperative's financial planning. Even age is unpredictable, because members' age is usually not recorded by the cooperative. This weakness can be minimized by compiling a record of these events and corresponding equities involved and using these data together with actuary tables to set up an equity redemption plan.
3. The estate option prevents members from personally benefiting from overinvested equity during their lifetimes. However, it could serve as an insurance policy for the estate. Similarly, redemption at retirement age could augment retirement income.
4. If equity redemption is triggered by events that the member can control, and the shortrun benefits are a factor in the decision (table 3-5.), special plans could be unfair to other members and place the cooperative in a precarious financial position. Redemption in these cases, for example, for members who shift patronage to other businesses, probably should not be granted, or at least be given low priority. The board may also wish to consider excluding the redemption of equity owned by still active members who will continue to benefit from the cooperative, even though they have reached the specified retirement age.

Measuring Program Performance

Many cooperatives may be interested in using modern data processing equipment to compute measures by which they can judge the performance of their equity redemption programs. A number of measures exist. They include percentage of allocated equity redeemed, weighted average age of equityholders, average age of equity allocations, and correlation between the value of equity held by patrons and their patronage during a base period. Each has its own advantages and can be used for different purposes. However, none of these measures relates equity investment to current patronage. The disparity index was created to overcome this

shortcoming.

The *disparity index* measures the difference between actual equity financing of a cooperative and financing in proportion to patronage. It can be used to measure the performance of an equity program over time, compare the performance of cooperatives, or, through simulation, compare the performance of alternative programs. The value of the index can range from 0 to 1. The higher the value, the greater the disparity between actual financing and financing in proportion to use. In effect, the disparity index measures the percentage of allocated equity not held in proportion to patronage.

Computing the Index

It is easy for any cooperative to compute its disparity index value. To do so, follow these steps:

1. Determine the proportion of the cooperative's total patronage done by each patron during the last year or during a base period.
2. Multiply the proportion of patronage done by each patron times the total allocated equity of the cooperative to determine the amount of equity the patron would supply if equity was supplied strictly in proportion to patronage.
3. For each patron, subtract the value determined in step 2 from the amount of allocated equity the patron is currently supplying.
4. Regardless of whether the amount determined in step 3 for each patron is positive or negative, treat it as if it is positive.
5. Add the amounts determined in step 3 (now all positive).
6. Divide the sum determined in step 5 by two times the total allocated equity of the cooperative. This value is the disparity index.

As an example, consider the data for the hypothetical two-patron cooperative in table 3-8. Patronage done by Patron A represents three-fourths of the cooperative's total patronage. If equity was supplied in proportion to patronage, Patron A would provide three-fourths of the equity, or \$150. Thus the difference between what the patron would supply according to patronage and what the patron actually supplies ($\$150 - \100) is \$50. Patron B would provide one-fourth of the equity, or \$50, if equity was supplied in proportion to patronage. For Patron B, the difference between what the patron would supply according to patronage and what the patron actually supplies is also \$50. The sum of differences between what the patrons would supply according to patronage and what the patrons actually supply ($\$50 + \50) is \$100. Dividing \$100 by two times the total allocated equity ($2 \times \$200$), the disparity index is 0.25. In other words, 25 percent of the equity in the cooperative is not held in proportion to patronage.

Table 3-8—Patronage and equity allocations for hypothetical cooperative

Patron	Patronage	Equity allocations
	<i>Dollars</i>	
A	300	100
B	<u>100</u>	<u>100</u>
Total	400	200

A cooperative can use this value to determine the extent to which those benefiting from the cooperative are financing it. Or, conversely, it can determine the extent to which those no longer benefiting from it are still financing it. This gives members a measure of how well their equity program is performing, and over time they can see whether this performance is improving or not. For a cooperative not satisfied with the performance of its program, comparison of the disparity index for alternative equity programs may help in selecting a better one.

Simulation Results

To compare the performance of alternative equity redemption programs, the financing of a hypothetical cooperative was simulated over a 50-year period. Disparity index values were calculated for first in-first out revolving fund, percentage-of-all-equities, and special plans.

In first in-first out revolving fund plans, equities are redeemed in the order they are allocated. With percentage-of-all-equities plans, the cooperative redeems a percentage of the equities held by each patron, regardless of when they are allocated. Under special plans, equities held by estates or by patrons who are over a certain age, are no longer farming, are no longer in the cooperative's service area, claim hardship, or request redemption on an "on call" basis are redeemed.

Revolving fund plans with 5- and 10-year revolving periods were examined. Under the percentage-of-all-equities plan, either 3 or 20 percent of each patron's allocated equity was redeemed each year. To close out the equity accounts of inactive patrons, balloon payments were made to these patrons either at the time they ceased patronizing or 10 years afterward. With the special plans, all of a patron's equities were redeemed at the time the patron ceased patronizing or upon the occurrence of a particular event 10 years afterward.

Simulations for each plan were run under each of five scenarios. In each scenario, the patrons of the cooperative were assumed to be uniformly distributed over the 50-year period in terms of the number of years that had passed since they had begun patronizing the cooperative. The scenarios are as follows:

Scenario A: Each patron contributes one unit of new equity each year

from the first year of patronage (Year 1) through the last year of patronage (Year 40).

Scenario B: Each patron contributes one unit of equity in Year 1. Patron's annual equity investment increases by one unit each year through Year 40.

Scenario C: Each patron contributes one unit of equity in Year 1. Patron's annual equity investment increases by one unit each year through Year 30, after which it decreases by three units each year through Year 39. Patron contributes one unit of equity in Year 40.

Scenario D: Each patron's annual equity investment oscillates in 5-year increments. From Year 1 through Year 5, patron contributes two units of equity each year; from Year 6 through 10, patron contributes two units of equity each year; from Year 11 through Year 15, patron contributes two units of equity each year; and from Year 16 through Year 20, patron contributes one unit of equity each year. This pattern is repeated from Year 21 through Year 40.

Scenario E: Each patron contributes one unit of new equity each year from Year 1 through Year 10, after which patronage ceases.

These scenarios were designed to produce comparisons of the plans in which (A) patronage is constant throughout the farming careers of patrons; (B) patronage increases throughout the farming careers of patrons; (C) patronage increases through the early years of patrons' careers and declines as patrons move toward retirement; (D) patronage fluctuates from period to period during the patrons' careers; and (E) patronage lasts only a few years.

Results of the simulations presented in table 3-9 show that the performance of a plan depends on the patterns of patronage. Nevertheless, the 5-year revolving fund plan generally performed the best in terms of having the lowest disparity index. Only under Scenario B, in which patrons' contributions of new equity continually increase, did the percentage-of-all-equities plans with immediate balloon payments do better. Under all other scenarios, the 5-year revolving fund plan performed the best. The 10-year revolving fund plan performed less well, doing worse than the percentage-of-all-equities plan, with a 20-percent annual redemption of equity under all five scenarios.

The percentage-of-all-equities plan with immediate balloon payments generally performed well compared with the other plans, especially when equity was redeemed at a 20-percent annual rate. Of course, the same plan with balloon payments 10 years after last patronage did not perform as well. Performance of this plan diminished as the percentage redeemed declined. At 3 percent, a more feasible level of redemption, this plan had one of the worst disparity index values, particularly under Scenario E.

Table 3-9 — Disparity index for revolving, percentage-of-all-equities, and special plans under different patronage scenarios

Plan	Scenario				
	A (Constant)	B (Increasing)	C (Increasing then decreasing)	D (Oscillating)	E (Brief)
			<i>Value</i>		
Revolving fund:					
Five-year revolving period	0.075	0.141	0.143	0.233	0.300
Ten-year revolving period . . . . .	.137	.248	.250	.344	.550
Percentage-of-all-equities:					
Three-percent per annum redemption:					
Immediate balloon payment . . . . .	.212	.127	.287	.317	.808
Balloon payment 10 years after last patronage	.309	.380	.452	.417	.832
Twenty-percent per annum redemption:					
Immediate balloon payment . . . . .	.092	.054	.163	.241	.446
Balloon payment 10 years after last patronage	.118	.201	.212	.272	.446
Special:					
Redemption upon last patronage . . . . .	.256	.154	.324	.350	.870
Redemption 10 years after last patronage . . .	.381	.435	.521	.476	.899

The special plan performed relatively poorly when redemption occurred 10 years after last patronage. Only when patronage increased throughout the farming careers of patrons and equity was redeemed immediately upon cessation of patronage, did the special plan do as well as other plans.

Although simulations were not run for the base capital plan, the disparity index for this plan generally would be low, depending on the length of the base period used in the plan and the methods used in meeting the requirements of underinvested patrons and redeeming equity of overinvested ones. Base capital plans with short base periods and rapid adjustments in patron investments probably would perform at least as well as the other plans.

Other Considerations

Because equity redemption plans vary in the amount of equity patrons must invest each year to provide a given level of equity, the disparity index value should not be the only consideration a cooperative uses in selecting a plan. (Chapter V discusses the trade-offs between the level of cash patronage refunds and equity redemption.) Table 3-10 indicates the annual equity investment of patrons under Scenarios A through E for plans equivalent in terms of maintaining the same amount of equity capital. Generally, the plans with the lowest disparity index values require the greatest annual patron investments. Active patrons must assume a larger share of financing the cooperative to redeem equity of overinvested and former patrons. Under some circumstances, however, a plan may have both a lower disparity index and annual patron investment than another. This may indicate that the plan is more efficient in terms of providing the least disparity at the least expense to patrons.

Because performance of a particular plan varies according to the specific characteristics of the plan and the pattern of patronage, it is difficult to make generalizations applicable to specific cooperatives. However, any cooperative can use the disparity index to monitor the performance of its program of equity formation and redemption. If its index value indicates the program is not doing a good job of maintaining equity in proportion to patronage, the cooperative may benefit from examining alternative plans.

Table 3-10—Annual equity investment necessary for equivalent revolving, percentage-of-all-equities, and special plans under different patronage scenarios¹

Plan	Scenario				
	A (Constant)	B (Increasing)	C (Increasing then decreasing)	D (Oscillating)	E (Brief)
	<i>Dollars</i>				
Revolving fund:					
Five-year revolving period.....	20.00	20.00	20.00	20.00	20.00
Ten-year revolving period.....	10.00	10.00	10.00	10.00	10.00
Percentage-of-all-equities:					
Three-percent per annum redemption:					
Immediate balloon payment.....	7.49	10.32	8.19	7.03	4.77
Balloon payment 10 years after last patronage	5.45	6.40	5.72	5.27	4.17
Twenty-percent per annum redemption:					
Immediate balloon payment.....	28.57	32.03	27.39	27.22	25.00
Balloon payment 10 years after last patronage	25.32	25.60	25.24	25.22	25.00
Special:					
Redemption upon last patronage.....	5.13	7.69	6.01	4.79	2.90
Redemption 10 years after last patronage....	3.39	4.35	3.75	3.24	2.25

¹Figures indicate annual equity investment necessary to maintain \$100 equity in cooperative.

FOOTNOTES

¹ The revolving fund plan is the subject of an entire book by Erdman and Larsen.

² Erdman and Larsen, pp. 23-54.

³ Hulbert, Griffin, and Gardner, p. 30.

⁴ Brown and Volkin, p. 9.

⁵ Bradley, pp. 3, 6; Erdman, p. 343; Hamman, p. 106.

⁶ Hamman, p. 106.

⁷ Bradley, p. 3.

⁸ Griffin (37), p. 1.

⁹ Brown and Volkin, p. 8.

¹⁰ National Rural Utilities Cooperative Finance Corporation and National Rural Electric Cooperative Association, p. 48.

¹¹ Brown and Volkin, p. 8.

¹² Scofield and others, p. 19.

¹³ Brown and Volkin, p. 5.

¹⁴ Scofield and others, p. 1.

¹⁵ Adapted from Scofield and others, pp. 12-15.

¹⁶ These schedules can be obtained by sending for *Life Tables* from National Center for Health Statistics, Public Health Service, U.S. Department of Health, Education, and Welfare, Hyattsville, Maryland.

¹⁷ Cobia and Navarro, p. 4.

IV. FACILITATING PLANS

The previous chapter discussed the principal equity redemption plans cooperatives use and some of the variations in these plans. Cooperatives also have developed methods for improving these plans by expediting the transfer of equity from overinvested to underinvested members. Such a program minimizes the adverse financial impact of equity redemption on the cooperative and provides members with more desirable (generally, more liquid) investments. Examples of these plans include exchange of equity among members, redemption at a discount, and conversion of equity to debt securities.

Exchange of Equities Among Members

In this section, exchange of equities refers to transfers of allocated equities that have been issued as evidence of retained patronage refunds and per-unit capital retains. Such allocated equity includes certificates of equity, preferred stock, common stock, or other equity interests generated by patronage. Not discussed here are equities sold as direct investments to the general public or to members, such as preferred stock with a cumulative dividend.

The extent to which equityholders buy and sell equity capital in cooperatives varies with the type of equities, articles of incorporation and bylaw provisions, policies of boards of directors, provisions in State cooperative statutes, and requirements of State and Federal securities laws. Equities such as common stock and membership certificates that carry voting rights usually have more transfer limitations than equities without voting rights.

In practice, only a small amount of cooperatives' equity capital is exchanged. The cooperative principle of limited return on member capital and the provision in many bylaws that capital stock may be redeemed by the cooperative at book or par value, whichever is lower, deters much trading of member capital. Equities in revolving funds may be evaluated and a transfer price determined if a cooperative has a consistent equity redemption policy. But without such a program, it may be difficult to establish a value between prospective buyers and sellers.

Reasons for Exchanges of Allocated Equities

Cooperatives may become interested in exchanging equities among members for the following reasons:

1. To help shift equity from overinvested members to underinvested members where base capital plans are used. In some cases, the latter members may have to pay interest on their shortfall if they do not meet their requirements.
2. To increase members' investment liquidity. Members in high-income tax brackets may want funds to pay taxes on deferred noncash refunds.

Some may discount the future value of the refund. Other members simply may need money.

3. To enhance the value of equity capital as collateral, although the value may be affected by discounts applied.
4. To handle adjustments in patronage rights among members when patronage is linked to equity. From the cooperative's point of view, it will receive the planned volume only if its equity is held by active patrons.
5. To make it easier for prospective members to make their initial investments.

Conditions Facilitating Exchange of Equities

Factors likely to encourage the purchase and sale of equities are:

1. The degree to which boards and managers encourage inactive members to sell equities to active or prospective members and are willing to act as liaison among prospective buyers and sellers. Such cooperatives may lack funds for redeeming equities or may not want to redeem them out of order. A few cooperatives charge interest if the shortfall is more than a specified percent of the member's total requirement.
2. The willingness of equityholders to sell, and others to buy, equities at a discount.
3. Exchange of equity is well adapted to the base capital plan, particularly when equity capital is linked to patronage rights.
4. The extent that the income tax liability on qualified allocations received by patrons is relatively high. Equityholders may be willing to sell such allocations at a discount.
5. The profitability of the cooperative.

Limitations on Exchange

Equities without voting rights can usually be traded more freely than equities with voting rights. Because in some States holders of preferred stock are entitled to vote, one may not assume that only common stock or membership equity is subject to the more rigorous transfer restrictions or that preferred stock may be traded without limitation. The following limitations may apply to both voting and nonvoting equity:

1. Transfer must be approved by the board of directors. Some State laws require this; others leave it to the bylaws or to the terms printed on the equity instruments.
2. Equity purchasers must be producers of agricultural products or otherwise eligible for cooperative membership.

3. State incorporation statutes may limit the percentage of capital stock or other member capital that one member or stockholder may hold. For example, the cooperative marketing statutes in some States limit a member's ownership of common stock to one-twentieth, or 5 percent, of the total common stock.

4. Federal and State securities laws¹ may restrict equity transfer. Of the five Federal securities laws, only two, the Securities Act of 1933 and the Securities Exchange Act of 1934, are of significance to cooperatives. The 1933 Act regulates newly issued securities; the 1934 Act regulates trading of securities already issued.

The Securities Act of 1933 requires that a security be registered before it can be sold across State boundaries to the public. This insures full disclosure of information so the prospective buyer can make an informed decision. Registration is not required if farmer cooperatives qualify for tax treatment under section 521 of the Internal Revenue Code. Also, security issues of less than \$500,000 are treated specially.

If not otherwise exempt, nonsection 521 cooperatives engaged in the interstate sale of securities and with sales, assets, and stockholders above specified minimums may be required to register their securities with the Securities and Exchange Commission (SEC) in Washington, D.C. Indications are, however, that cooperatives may not have to register equity required for membership or nontransferable equity acquired pursuant to patronage, such as noncash patronage dividends and per-unit capital retains. In addition, there may be a question whether retained patronage refunds and per-unit capital retains are securities subject to registration.

Registering equity with the SEC so it can be traded across State lines among nonmembers is normally limited to relatively large cooperatives because of its cost. It can range from \$50,000 to \$100,000 and above, depending on the complexities and amounts involved.

Most provisions of the Securities Exchange Act of 1934 do not apply to cooperatives meeting the definition of a cooperative in the Agricultural Marketing Act of 1929, an inclusive definition covering most cooperatives. Nonetheless, the antifraud provisions of both the 1933 and 1934 Acts apply to all cooperatives regardless of whether the cooperative issue is exempt from registration. Even if a cooperative is exempt from Federal securities laws and is doing business within only one State (intra-state), it is still subject to its State's securities laws (sometimes called "blue sky" laws). Both coverage and requirements vary considerably from State to State, with some having specific exemptions for farmer cooperatives and others having none. Because of the variation among States, no generalizations can be made about State "blue sky" laws. Antifraud provisions under the State consumer protection statutes apply to all cooperatives whether the cooperative issue is exempt from registration.

Cooperatives using the base capital plan may wish to add these limitations:

1. Only overinvested members may sell and only underinvested members may buy equities.
2. Only a maximum amount or percentage of the total equity requirement may be exchanged. For example, one large cooperative has a 5-percent limit.
3. Members are required to maintain a minimum level, for example, 50 percent of their equity.
4. A few cooperatives require members to pay interest on the amount of equity sold below their base requirements—at the same rate the cooperative must pay if it has to borrow money to replace such equities. This policy is intended to reduce equity sales by underinvested members.

Cooperatives are urged to consult their local attorneys before establishing bylaws and policies for buying and selling or exchanging equities among members and nonmembers.

Cooperative Examples

Equity exchanges most often occur in cooperatives using the base capital plan, particularly if patronage rights are linked to equity. It is also used by cooperatives employing revolving funds.

Tri-Valley Growers, San Francisco, California is a cooperative on a base capital plan that exchanges equity. (See appendix B.) Since starting a base capital equity program in the mid-sixties, Tri-Valley has made two changes in its bylaws. In 1974, active members were allowed to purchase equity from other equityholders to meet equity investment requirements. Since Tri-Valley's annual pools are subject to equity retains of \$10 million or more, this represents a substantial annual market for anyone wanting to liquidate equity holdings. Tri-Valley had two reasons for creating this equity. One was to respond to a general criticism by local lenders, who tended to look at equity holdings as poor collateral because of the relatively long refund or revolvment period and the absence of any due date obligation by the cooperative. A ready market for Tri-Valley equity has greatly enhanced its collateral value.

Tri-Valley members have purchased \$3 million in equity since the practice began 5 years ago. Most has been sold at 70 percent of face value. At 10 percent interest, the present value of equity to be refunded in the shortest potential period is 61 percent of face value, so sales at 70 percent are a fair return.

This otherwise beneficial change had an unforeseen consequence: Active members too readily sold their equity. (This problem could be avoided by not approving sales of underinvested members.) These sales had no

significant effect, but they violated the cooperative principle that each member should maintain an equity investment proportionate to patronage.

Tri-Valley responded with a second bylaw amendment that charges interest against a member's pool proceeds about equal to Tri-Valley's interest on a borrowed amount equal to the equity sold by the member. All members must maintain at least 50 percent of their equity requirement.

National Grape Cooperative Association, Westfield, N.Y. exchanges revolving fund certificates. Most of the capital that National acquires is in the form of noninterest-bearing allocation certificates and permanent equity credits, issued as partial payment for grapes delivered to National by its 1,700 member-growers. Both the certificates and credits, as well as other securities, are registered with SEC. While carrying a 20-year due date, the allocation certificates are considered as member equity and revolve on a 6-1/2 year cycle. At the end of fiscal 1980, National had \$37.4 million of these certificates, which are freely transferable to anyone if presented, properly endorsed, for transfer at the office of National Grape, and applicable transfer taxes and charges are paid.

About 15 to 20 percent of each year's issue, which ranges from \$5 million to \$8 million, is sold by members and brokers. There is no established market for allocation certificates, but National has periodically received bid price quotations from one to three securities dealers who have purchased such certificates at their quoted prices. National Grape further understands that allocation certificates are traded among growers and other persons without using a broker or dealer, sometimes at prices higher than the prices quoted by dealers. Price quotations stating prices at which certificates might be purchased from a dealer are not available. All price quotations are percentages of the face amounts of certificates.

National Grape also issues permanent² equity credits as partial payment for grapes marketed through National on the basis of \$50 a ton times a member's annual deliveries in the most recent 5 years. They total about \$7.6 million and are nondividend- or noninterest-bearing.

They are not redeemable or transferable except upon liquidation of the cooperative; however, National pays holders their equities within 5 years upon: (1) termination or suspension of a marketing agreement; (2) death of a grower with a marketing agreement; or (3) acceptance or transfer of equity credits from a holder of a terminated marketing agreement to a replacement holder in connection with the transfer, division, lease, or termination of a vineyard lease. In the past 5 years, about 3 to 4 percent of the total permanent equity credits has been redeemed annually.

Advantages

The main advantages of exchanging equities are:

1. Encourages members to sell equity capital to potential members.

2. Hastens the transfer of equities from overinvested to underinvested members.
3. Facilitates redemption of equities of estates and retired farmers that may be purchased at par value or at a discount.
4. Stimulates interest in cooperative financing and increases member understanding of the cooperative's capital needs and the value of member equities as collateral.
5. Enhances membership in the cooperative, because members have greater flexibility in using their equity.

Disadvantages

1. Misunderstanding may occur among members if equities are exchanged at various rates below or above par.
2. Equity ownership can become more out of proportion to use of the cooperative if underinvested members are allowed to sell their equity.
3. If registration of equities with State and/or Federal securities agencies is necessary, the benefits may not be worth the cost.
4. Some cooperatives may permit the sale of equities to nonproducers and employees. This practice may run afoul of the principle that agricultural cooperatives be owned by, controlled by, and operated for the mutual benefit of member-producers, not employees and nonproducers.
5. Sale of equity at other than book value also concerns some cooperative leaders, because a cooperative's equity then acquires speculative value. This makes valuation of member interests speculative, which, in turn, adds uncertainty to equity trading.

Evaluation

The advantages and disadvantages of exchanging equities depend on the types of eligible traders and the transfer restrictions. Fewer problems arise when equities are traded with members or producers eligible for membership than when equities are traded with nonproducers or nonmembers.

When equity is linked to patronage rights, its value may fluctuate with the profitability of growing the crop. This introduces a speculative nature many have tried to avoid.

If cooperatives permit exchange of allocated equities, the board of directors should:

1. Approve all equity exchanges to ensure each complies with the coop-

erative's incorporation statute, articles of incorporation, bylaws, and transfer provisions on stock or equity certificates.

2. Either prohibit or limit the ownership of allocated equities by nonproducers or employees. Any policy that permits nonproducer ownership of allocated equities must be scrutinized closely to determine whether that policy is compatible with State cooperative incorporation statutes, State and Federal securities laws, the Internal Revenue Code, and other State and Federal laws.

Redemption at a Discount

Members who need money, move from the area, or retire from farming may ask for early redemption of their allocated equity. Retiring equities out of sequence for special situations may be unfair to some members³. In response to these situations and to reduce the sometimes unexpected financial burden, several cooperatives with systematic redemption programs discount redemptions that members request ahead of schedule. This section discusses the discounting a few cooperatives use for redemption at less than face value when early redemption is requested.

Illustration of Discounting

A cooperative must be able to determine some values to implement a discounted equity retirement program. The following illustrates what would be necessary for a revolving fund:

1. Length of the revolving period,
2. Equity to be redeemed each year,
3. The discount (interest) rate to be used.

The discount rate selected generally reflects the prevailing interest rate such as the prime rate or the rate charged by the district Bank for Cooperatives. The rate selected should be one that would not change the remaining members' equity position in the cooperative, given interest and tax considerations.

Assume that a cooperative operating a 5-year revolving period redeems estates at their discounted present value. It has selected a 10-percent discount rate. Present-value multipliers can be taken from present-value tables (table 4-1)⁴. These multipliers (column 3, table 4-2) are applied to the equity to be redeemed in each future year (column 2) to arrive at the present value (column 4). A cash payment of \$1,506.42 would be made to the member in this illustration. The cooperative normally treats the remaining balance of \$1,891.18 as nonmember business. These funds could be used to pay interest on funds borrowed by the cooperative to replace the \$1,506.42 paid to the member and possibly income tax on the \$1,891.18.

Table 4-1—Simplified present value table

Year	Discount rate (percent)			
	6	10	15	20
1	0.943	0.909	0.870	0.833
2 .....	.890	.826	.756	.694
3 .....	.840	.751	.658	.579
4 .....	.792	.683	.572	.482
5 .....	.747	.621	.497	.402
6 .....	.705	.564	.432	.335
7 .....	.665	.513	.376	.279
8 .....	.627	.467	.327	.233
9 .....	.592	.424	.284	.194
10 .....	.558	.386	.247	.162

Source: Smith and Cooper, p. 55.

Table 4-2—Illustration of discounted value of revolving fund equity credits for an individual member

Year	Equity scheduled for redemption	Present value multiplier ¹	Present value
	<i>Dollars</i>		<i>Dollars</i>
1982	313.80	0.909	285.24
1983	328.20	.826	271.09
1984	363.20	.751	272.76
1985	483.80	.683	330.44
1986	558.60	.621	346.89
Total	2,047.60		1,506.42

¹Assuming a 10-percent discount rate.

Justification for Discounting

Equitable financing and redemption are logical extensions of the service-at-cost principle for cooperatives. To help finance the cooperative, part of the patronage refund or a per-unit capital retain is withheld. The amount withheld is in proportion to patronage and is generally intended to be held the same length of time for all patrons, and does not benefit from speculative profit.

Members naturally feel they should someday receive cash for their equity, and inactive members and others in certain situations feel justified in wanting their allocated equity redeemed. However, when a member chooses not to provide this equity for the same length of time as all other members are doing, a levy against the members' investment is justified to achieve equitable treatment.

The articles of incorporation or bylaws should provide for membership termination, the cooperative's rights to purchase or redeem common and preferred stock, retained capital credits, and members' rights for early and discounted redemption.

General Tax Treatment

Federal tax law does not specify the appropriate tax treatment for a discounted redemption program. Cooperatives considering such a program may wish to request a private ruling from IRS specifying the tax consequences facing both the cooperative and patrons. A private ruling applies only to the taxpayer who requested it and is not legal precedent. However, an examination of the published private rulings reveals the following guidelines for discounted redemption.

Qualified Patronage Refunds—The current IRS position is that the cooperative reduces its taxable income when the refund is issued as provided in Subchapter T of the tax code. When the cooperative redeems the retained amount at less than face value, this unredeemed amount will be recognized as income. This reverses the tax effect. The cooperative cannot deduct this income for tax purposes by allocating it to its current patrons. For the patrons, the unredeemed portion of a qualified written notice of allocation originally reported as income would be treated as an ordinary loss.

Nonqualified Patronage Refunds—The cooperative does not reduce its taxable income when it issues nonqualified patronage refunds. Therefore, upon redemption, it deducts only the dollar amount actually redeemed. Patrons do not include the allocation in their income for the year that it is received. In the redemption year, the member recognizes as income only the amount received from the redemption. The member does not recognize the discounted amount received for tax purposes.

Features of an Equitable Discount Plan—The Internal Revenue Service recently issued letter rulings about tax treatment for certain patrons and their particular cooperative concerning discounted redemption of retained capital⁵. The letters will help clarify tax implications for any cooperative developing a discounted redemption plan. In these particular rulings, the early redemption option applied only to the prior fiscal year's capital allocation, not to previously issued allocated equity.

Based on the letters, the requesting cooperative clearly described certain operating features that constitute assumptions that may be important for any organization to meet. These assumptions included:

1. A business purpose of servicing members' supply and marketing needs and remitting annual net proceeds to these same members on a patronage basis.
2. Control vested in members with equal voting rights.
3. All members are producers.
4. Allocations retained for working capital purposes and allocation notices properly issued to member-patrons informing them of their obligations.
5. The cooperative filed tax returns each fiscal year, and deducted allocations from gross income.
6. Allocations historically returned to members under a systematic redemption program.

An equitable plan for discounting could and should evolve from the systematic redemption program. Motivation for establishing a discount plan should reflect members' desire for early redemption, not the cooperative's desire for any presumed business gain. By establishing and recognizing an elective right to discounted early redemption, the member is the party who:

1. Initiates the process in any given year,
2. Elects for redemption earlier than is customary, and
3. Elects to accept the discount.

The letter rulings indicated an imaginative approach for securing the early redemption funds and for setting the discount rate. Funds for replacing redeemed equity would come from a loan with the entire principal to be paid in the year when redemption would otherwise occur. Interest on the loan would be paid annually at a fixed rate. This rate could be the primary factor in setting the discount rate. Therefore, the member satisfies his responsibility to finance the cooperative at a cost equal to the rate the cooperative can borrow money.

The accounting to be employed would further ensure the neutral effect on other members and the cooperative. All gains and costs from the discounted redemption package would be treated as nonmember business. This would offset the gains from the unredeemed amount by the combined interest costs on the loan in the first and subsequent years, and income taxes associated with the nonmember income.

The cooperative established certain conditions that would have to be met to exercise the option. The cooperative would notify its members annually of their right for a discounted cash redemption. Within 30 days af-

ter the allocation notification date, the electing member would enter into a written agreement with the cooperative stating that the dollar amount to be received would satisfy as redemption of the allocation. Thirty-one or more days after the notification date, the cooperative would pay the member the discounted amount of the allocation in cash. For Federal income tax purposes, the members in this case, would treat the unreceived amount (the difference between the stated dollar amount of the allocation and the amount received) as an ordinary loss. Electing members would attach copies of the letter rulings affirming this action to their income tax return.

Experience with Discounting

A milk cooperative, traditionally operating an 8-year revolving program, applied a 5 percent discount to each year retained equity of producers going out of business was redeemed early. Their discount on the most recent equity allocation, in this case, was 40 percent. This cooperative established the program many years ago when interest rates were lower and had not increased the discount rate as interest rates increased in recent years. Also, the discount was not compounded, but simply 5 percent for each year the redemption was ahead of schedule.

Another cooperative with a 7-year revolving program further simplified this calculation by discounting the total equity allocation 40 percent, rather than applying a separate rate to each year's particular allocation.

An egg marketing cooperative encountered several poor years and discontinued its redemption program. As the weak financial condition continued, members voiced doubts of ever getting their allocations back. When the cooperative later resumed a longer redemption program, it also announced an option for early redemption at a 10-percent noncompounded discount for each year ahead of the announced schedule. Some producers initially used the option, but it was later dropped from lack of interest and use.

In these and similar situations, management considered the unredeemed portion to be a type of income to the cooperative. For some cooperatives, this was an important motivation for offering the program. The redeemed portion reduced the cooperative's net worth, but increased the cash assets of the former member.

Because these situations reflect a vested interest in the financial outcome by both the cooperative and the equityholder and appear to lack a clearly defined or undisputed tax consequence, they are not good models. Ideally, the discount rate should be one that leaves the remaining members indifferent to the action. That is, they would be no better or worse off.

Advantages and Disadvantages

Justifications for a discount program are:

1. Places all retirements of all patrons on a more equal or present dollar value basis.
2. Reinforces the concept of member's responsibility to finance their cooperative, while recognizing the circumstances of individual members.
3. Explicitly recognizes the present value concept.

Problems associated with discounting out-of-sequence redemption are:

1. It is not well adapted to equity redemption programs where the anticipated redemption dates cannot be estimated.
2. Generally, it is difficult to establish an equitable and fair discount rate.
3. Because discounting is little used and will continue to be refined, a program must be carefully researched and reviewed to determine income tax consequences.
4. Some members, not understanding or appreciating the present value concept, may feel that all redemptions should be at book value.

If a cooperative chooses to adopt a program for early redemption of discounted equities, it should specify carefully the procedures for the plan in its articles of incorporation or bylaws.

Unallocated Equity

This section describes using unallocated equity to reduce pressure on the cooperative to provide funds for redemption and to speed up the redemption of allocated equities. Unallocated equity is equity not allocated to any member, patron, or other individual account by any form of certificates or book credit. It may come from such sources as nonpatronage and/or nonmember income, net savings from member patronage, and from mergers or acquisitions of other businesses.

About 15 percent of agricultural marketing and supply cooperatives' equity was unallocated in 1976.⁶ Most cooperatives have at least some unallocated equity, 17 percent do not.⁷ But a few cooperatives have more than 90 percent unallocated equity. Geographically, the relative importance of unallocated reserves ranges from 0.1 percent in the Texas Banks for Cooperatives district to 51.7 percent in the Springfield district.

Advantages

The reduced allocated equity caused by increasing the proportion of unallocated equity produces two shortrun benefits. There is less equity to be redeemed. Therefore, a given cash flow can support a faster equity turnover. Or, from the cooperative's perspective, less cash flow is required to maintain a given turnover of equity. What equity is allocated can be more readily redeemed. Use of unallocated equity may permit faster redemption of allocated equity, but because less equity is allocated, total benefits to patrons may be reduced.

Different ways of handling losses also affect equity redemption. In 1976, about three-fourths of the cooperatives with operating losses charged them against unallocated equity. The others allocated losses to patrons either by reducing the member's equity accounts or by charging them directly.

This topic is under current review by taxing agencies. The issues are complex and still evolving. There are, however, implications for equity redemption that are relatively clear. Assume, for example, that a cooperative with \$1,000,000 in total equity, including \$800,000 allocated and \$200,000 unallocated, incurs a loss of \$100,000. If this loss is charged against unallocated equity, unallocated is reduced to \$100,000 and allocated remains the same. If the loss is allocated to patrons' equity accounts, the total allocated equity would drop to \$700,000 and the unallocated remain at \$200,000. With less allocated equity remaining, future equity redemption will represent a greater proportion of outstanding allocated equity. If a revolving fund is used, the period could be somewhat shorter, and if other redemption plans are used, the adjustment could be made faster. However, the apparent advantage of faster equity redemption is accompanied by the disadvantage of reduced allocated equity.

When losses are charged to allocated equity of current members, inactive members do not have any loss allocations, and their outstanding equities move up in the redemption order because of losses allocated to active patrons. Patrons receiving loss allocations would have their future equity redemptions decreased. If losses are charged to allocated equity, patrons will have less total allocated equity, but adjustments between active and inactive members will be made faster.

If a qualified patronage refund is reduced subsequently by having a loss charged against it, patrons can include this loss in the year's operations the same as if they had lost actual cash. A loss allocation has a positive value to patrons equal to the amount of the loss multiplied by the patrons' marginal tax rate. If the loss is charged against unallocated equity, there are no current income tax consequences to members. Cooperative bylaws usually determine the options available for handling losses. Often cooperatives have resisted allocating losses to members' accounts, possibly because of expected negative reactions. Some extraordinary losses may have unusual circumstances associated with them, and these may reason against allocating the loss entirely to current patrons.

There are several reasons for unallocated equity in addition to facilitating equity redemption and handling losses. A few of the major justifications follow.

1. A few cooperatives have a legal commitment to build unallocated equity to a certain level. Most State cooperative statutes allow reserves for necessary purposes such as losses and capital expenditures. Other State statutes require that equity reserves be established. Some laws specify the type of reserve, allocated or unallocated. Still other State laws prohibit

or at least discourage use of unallocated equity. Unallocated equity generally is not limited if a cooperative is covered by the general corporation statute.

Some cooperative bylaws require that a proportion of net savings be placed in unallocated equity. Besides being convenient, it may minimize the total cooperative-member tax burden to be able to absorb investment tax credit benefits from unallocated equity. (See section in Chapter VI on taxation.)

2. Several writers have also suggested that revolving funds should be supplemented with a higher proportion of truly permanent capital⁸—that cooperatives should adopt more stable financial structures less dependent on actual or implied revolving obligations. They claim that revolving funds become too restrictive and impractical.

The basis for these comments comes in part from creditors unfamiliar with cooperative finance. They may feel uncertain in evaluating the creditworthiness of an organization with a high proportion of equity redeemable back to members and patrons. The dynamic nature of cooperatives' equity accounts may not reassure lenders looking for permanent risk capital to protect the credit they give the cooperative. Unallocated equity reassures these lenders.

3. During inflation, inventory costs and depreciation expenses may be understated because of increasing replacement costs for inventory and capital assets. As a result, net savings may be overstated. To preserve cash flow and prevent capital erosion, some cooperatives may choose not to allocate all net savings.

4. Cooperatives without section 521 tax status often retain earnings from nonmember and nonpatronage sources as unallocated equity, because both they and their members will pay taxes on this income if it is distributed to members.

5. A limited number of cooperatives, mainly bargaining associations, livestock shipping associations, and a few farm supply cooperatives operate without retained patronage refunds or per-unit capital retains, and as a group have a higher proportion of unallocated equity than most other cooperatives. These cooperatives typically have relatively large numbers of members and small amounts of equity and net savings. Needed equity is accumulated as unallocated equity, and any additional savings are returned as cash patronage refunds. Patrons receive cash benefits, and cooperatives have a source of equity with little or no equity redemption concerns. Issuing patronage refunds may be more of a nuisance to members than an economic value.

Therefore, if a cooperative's service, and not return of net savings, is

the important patron benefit, unallocated equity may have a greater role. This system is simple and avoids seemingly complex financing methods involving qualified and nonqualified, cash and noncash patronage refunds, and an uncertain equity redemption.

Disadvantages

As the level of unallocated equity in a cooperative increases, questions whether the cooperative operates on a “cooperative basis” or for the “mutual benefit of its members” arise. Both operating requirements are common in Federal and State statutes governing cooperatives.

Savings returned as patronage refunds is a basic principle of cooperative operations. Retained patronage refunds provide equity financing and are an interim step in returning benefits to members; therefore, allocated equity is an important characteristic of cooperatives.

When unallocated equity is used, individual members’ ownership is less apparent. Some cooperative leaders argue this erodes the tie to the cooperative to the extent that members do not hold equity in it; these leaders recommend cooperatives have limited unallocated equity. Further, regulations require that active members must own 50 percent of a cooperative’s equity⁹ for a cooperative to qualify to obtain price supports in the name of its members.

Questions also arise regarding who owns the cooperative and who would receive the unallocated equity if the cooperative were to liquidate. The bylaws usually stipulate how funds are to be distributed upon dissolution. Some bylaws may call for these funds to be distributed after all liabilities and allocated equity have been paid to patrons based on past patronage records. For cooperatives with such provisions, the bylaws can give patrons a claim to residual funds, even though allocations were not made to their accounts during the operating life of the cooperative. However, it may be difficult to carry out this option. Other bylaws distribute the residual funds to current equityholders at dissolution. (Benefits to patrons from allocated patronage refunds are compared with those from unallocated equity in chapter V.)

As the proportion of unallocated equity increases in a cooperative, some observers suggest management becomes more independent from member control. This reasoning holds that farmers with less allocated equity investment in a cooperative will not be as actively involved and will leave decisions to hired managers.

Conversion to Preferred Stock or Debt

Equity is sometimes not redeemed in cash but converted to dividend-bearing preferred stock (some cooperatives allocate retained patronage refunds as nondividend-bearing preferred stock) or interest-bearing debt instruments. This is done either to relieve a cooperative’s temporary cash flow problem or to give members an additional option. Preferred stock

gives the cooperative greater flexibility in that commitments to pay dividends (cumulative or not) and to redeem the stock are optional. Dividends on preferred stock are tax exempt only for section 521 cooperatives. Members may prefer dividends over no redemption at all; preferred stock equity is also more acceptable as collateral.

Converting allocated equity to debt instruments corresponds more closely to redemption than converting it to preferred stock, because the cooperative must pay the newly created debt when due and the interest is a fixed and deductible expense.

One reason for redeeming equity by converting it to preferred stock or debt in lieu of cash payment is a cooperative's cash flow problem. Conversion to preferred stock is relatively safe for the cooperative because, depending on the conditions assigned the new equity, the cooperative does not have to redeem it in cash, and has several options for payment of dividends. But such transfer in place of cash payment does little for the member except provide a dividend income. It still cannot be readily converted to cash, and future redemption is not necessarily assured.

Redeeming equity by converting it to debt to avoid a short-term cash flow problem may be safe, provided the problem is only temporary and the cash will soon be available. If there is a fundamental financial problem, converting equity to debt only will delay and probably aggravate it. This has forced a few cooperatives into financial reorganization.

Another and safer way to exchange equity for debt is to offer it to members as an alternative to cash and then substitute the options taken for existing debt. This increases the options open to members, and the debt-equity ratio does not deteriorate. Normally, the interest rate given members on this debt is 1 or 2 percentage points below a bank loan rate. The difference is used to cover the costs of managing the program. Members like this arrangement. Their participation increases, they receive a relatively high rate of return, and the cooperative's interest expense may decrease while its image improves.

FOOTNOTES

¹ Weiss and Crosland.

² This equity is not literally permanent if it is being redeemed. The term "permanent" is apparently used to distinguish equity not subject to a revolving fund.

³ National Telephone Coop. Assn., p. 19.

⁴ Present-value tables can be found in several financial handbooks and textbooks. For example, see Smith and Cooper, p. 55.

⁵ Index numbers 8033070 and 8031041. The National Council of Farmer Cooperatives issued a *Legal-Tax-Accounting* memorandum describing these rulings on July 8, 1980.

⁶ Griffin and others, pp. 38-49.

⁷ Griffin and others, p. 40.

⁸ Bradley, p. 4; and Ryan, pp. 30-32.

⁹ U.S. Government.

V. RELATIONSHIPS BETWEEN EQUITY REDEMPTION, CASH FLOW, AND GROWTH

Equity redemption competes for available cash flow with other uses of funds, such as cash patronage refunds and growth. A cooperative that seeks to redeem a large percentage of its equity while paying a high level of cash patronage refunds and maintaining a fast rate of growth may not be able to accomplish all of its goals. This chapter focuses on the financial trade-offs between cash patronage refunds, equity redemption, and growth. It also examines the use of per-unit capital retains and how the nonqualified method of allocation can improve the cooperative's cash flow and increase benefits to patrons. Tables appearing in this chapter were calculated using formulas presented in appendix D.

In most equity formation and redemption programs, the level of cash patronage refunds, equity redemption, and growth in allocated equity are determined by several factors: (1) cash investments; (2) per-unit capital retain deductions; and (3) net savings available for allocation as patronage refunds after deducting dividends on patron equity, additions to unallocated reserves, and income taxes arising from these distributions.

With programs in which allocated equity consists exclusively of purchased equity, the cooperative's ability to sell purchased equity to its patrons is the sole determinant of the amount of equity redemption and the growth in allocated equity the cooperative can maintain. Programs in which allocated equity consists of retained patronage refunds or per-unit capital retains are more complicated.

Retained Patronage Refunds

If a cooperative's allocated equity consists of retained patronage refunds, the rate of return to allocated equity determines the cooperative's level of cash patronage refunds, equity redemption, and growth in allocated equity. The *return to allocated equity* is defined as the net savings available for allocation as patronage refunds, after deducting dividends on patron equity, additions to unallocated reserves, and income taxes arising from these distributions. The *rate of return to allocated equity* is defined as the return to allocated equity expressed as a percentage of allocated equity.

Table 5-1 presents the rates of return to allocated equity necessary for selected levels of cash patronage refunds and percentage annual rates of equity redemption for a 10-percent annual rate of growth in allocated equity. To maintain a program of 30 percent cash patronage refunds, a 5-percent rate of equity redemption, and a 10-percent rate of growth in allocated equity, a cooperative must earn a rate of return to allocated equity of 21.4 percent.

If the cooperative cannot attain a rate of return this high, it will have to reduce its cash patronage refunds, equity redemption, or growth in allocated equity. Likewise, if the cooperative wants to increase its level of

Table 5-1 —Rate of return to allocated equity necessary for selected levels of cash patronage refunds and percentage annual rates of equity redemption at 10-percent rate of growth in allocated equity

Patronage refunds paid in cash (percent)	Rate of equity redemption (percent)					
	0	5	10	15	20	25
	<i>Percent</i>					
20.....	12.5	18.8	25.0	31.3	37.5	43.8
30.....	14.3	21.4	28.6	35.7	42.9	50.0
40.....	16.7	25.0	33.3	41.7	50.0	58.3
50.....	20.0	30.0	40.0	50.0	60.0	70.0
60.....	25.0	37.5	50.0	62.5	75.0	87.5
70.....	33.3	50.0	66.7	83.3	100.0	116.7
80.....	50.0	75.0	100.0	125.0	150.0	175.0
90.....	100.0	150.0	200.0	250.0	300.0	350.0
100.....	(1)	(1)	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds, no equity is retained for revolve-
ment.

Source: Computed using equation (5a) in appendix D.

cash patronage refunds, equity redemption, or rate of growth, it must begin to earn a higher rate of return to allocated equity or lower its other goals. For example, if current patrons pressured the cooperative to raise cash patronage refunds from 30 to 40 percent, it could do so only by (1) increasing its rate of return to allocated equity from 21.4 to 25 percent, or (2) by lowering the percentage equity redeemed each year to 2.8 percent, or (3) reducing its rate of growth in allocated equity to 7.8 percent.

The Revolving Fund Plan

Table 5-1 is useful primarily for examining the relationships between equity redemption and other cash flow uses for a cooperative that uses a base capital plan or a percentage-of-all-equities plan. In evaluating a revolving fund plan, the length of the revolvment period usually is more important than the percentage of equity redeemed each year.

Table 5-2 presents the rates of return to allocated equity necessary for selected levels of cash patronage refunds and revolving periods at a 10-percent-per-annum rate of growth in allocated equity for a revolving fund consisting of retained patronage refunds. The same types of trade-offs between the level of cash patronage refunds, equity redemption, and the rate of growth in allocated equity that were shown in table 5-1 are presented in table 5-2 for the revolving fund plan.

Table 5-3 shows the percentage of allocated equity acquired by retained

Table 5-2.—Rate of return to allocated equity necessary for selected levels of cash patronage refunds and revolving periods at 10-percent rate of growth in allocated equity

Patronage refunds paid in cash (percent)	Length of revolving period (years)									
	1	2	3	4	5	10	15	20	25	30
						Percent				
20	137.5	72.0	50.3	39.4	33.0	20.3	16.4	14.7	13.8	13.3
30	157.1	82.3	57.4	45.1	37.7	23.2	18.8	16.8	15.7	15.2
40	183.3	96.0	67.0	52.6	44.0	27.1	21.9	19.6	18.4	17.7
50	220.0	115.2	80.4	63.1	52.8	32.5	26.3	23.5	22.0	21.2
60	275.0	144.0	100.5	78.9	66.0	40.7	32.9	29.4	27.5	26.5
70	366.7	192.1	134.0	105.0	87.9	54.2	43.8	39.2	36.7	35.4
80	550.0	288.1	201.1	157.7	131.9	81.4	65.7	58.7	55.1	53.0
90	1100.0	576.2	402.1	315.5	263.8	162.7	131.5	117.5	110.2	106.1
100	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds, no equity is retained for revolvment.

Source: Computed using equations (5b) and (5c) in Appendix D.

Table 5-3—Percentage of allocated equity redeemable each year for selected levels of cash patronage refunds and rates of growth in allocated equity, given average rate of return to allocated equity

Patronage refunds paid in cash (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
	<i>Percent</i>					
20.....	21.6	16.6	11.6	6.6	1.6	(1)
30.....	18.9	13.9	8.9	3.9	(1)	(1)
40.....	16.2	11.2	6.2	1.2	(1)	(1)
50.....	13.5	8.5	3.5	(1)	(1)	(1)
60.....	10.8	5.8	0.8	(1)	(1)	(1)
70.....	8.1	3.1	(1)	(1)	(1)	(1)
80.....	5.4	0.4	(1)	(1)	(1)	(1)
90.....	2.7	(1)	(1)	(1)	(1)	(1)
100.....	(1)	(1)	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds and rate of growth, redemption of equity is impossible, because requirements for cash patronage refunds and growth in allocated equity equal or exceed the return to allocated equity.

Source: Computed using equations (1a) and (1b) in Appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80.

patronage refunds the average cooperative could redeem each year, given selected levels of cash patronage refunds and rates of growth in allocated equity. Table 5-4 shows the length of the revolving period, given selected levels of cash patronage refunds and rates of growth in allocated equity for the same cooperative under the revolving plan.

These tables were constructed using the average rate of return to allocated equity acquired by retained patronage refunds, determined by data from the ACS financial profile studies for fiscal years 1970 and 1976. Table 5-5 gives the estimated average rates of return to total assets and to allocated equity acquired by retained patronage refunds for farm supply, marketing, and marketing/farm supply cooperatives.

According to calculations based on these data, a cooperative with the 27-percent average rate of return to allocated equity could not pay the 49-percent average level of cash patronage refunds and average 13.9-percent-per-annum growth without increasing leverage. Of course, these results are for the average cooperative during specific years. Financial performance varies by cooperatives and by year. Some cooperatives could do better, while others would do worse.

Table 5-4—Length of revolving period for selected levels of cash patronage refunds and rates of growth in allocated equity, given average rate of return to allocated equity

Patronage refunds paid in cash (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
<i>Years</i>						
20.....	4.6	5.4	6.5	8.5	14.3	(1)
30.....	5.3	6.3	7.9	11.3	(1)	(1)
40.....	6.2	7.6	10.1	18.7	(1)	(1)
50.....	7.4	9.5	14.2	(1)	(1)	(1)
60.....	9.3	12.8	27.4	(1)	(1)	(1)
70.....	12.4	19.7	(1)	(1)	(1)	(1)
80.....	18.5	53.5	(1)	(1)	(1)	(1)
90.....	37.1	(1)	(1)	(1)	(1)	(1)
100.....	(1)	(1)	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds and rate of growth, revolvment of equity is impossible, because requirements for cash patronage refunds and growth in allocated equity equal or exceed the return to allocated equity.

Source: Computed using equations (2a) and (2b) in Appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80.

Table 5-5—Estimated average rates of return for U.S. farmer cooperatives, fiscal years 1970 and 1976

Type of cooperatives	Estimated rate of return to—			
	Total assets		Allocated equity acquired by retained patronage refunds	
	1970	1976	1970	1976
<i>Percent</i>				
Farm supply.....	10.4	14.4	22.3	35.7
Marketing.....	5.6	8.2	22.6	40.8
Marketing/farm supply.....	5.3	12.3	14.8	31.6
Weighted average.....	6.4	11.3	19.0	34.0

Source: Calculated from Griffin and others, pp. 24, 49, and 80.

Nonqualified Allocations

Some cooperatives with low income tax rates may find it advantageous to allocate patronage refunds in nonqualified form. In this case, patrons do not report noncash allocations as income, and the cooperative does not deduct them from taxable income. When the allocations are later redeemed in cash, the cooperative deducts the redemptions from its taxable income, and the patrons recognize them for tax purposes. (See chapter VI.)

Because patrons do not report nonqualified allocations as income until allocations are redeemed in cash, they avoid the possibility of paying more in taxes on an allocation than they receive in cash. At the same time, the cooperative may improve its own cash flow, if its average tax rate is lower than the percentage cash patronage refunds it would otherwise pay. If a cooperative has earned investment tax credit, it can use this to reduce its effective tax rate.

The average tax rate of the cooperative determines the cash outflow associated with nonqualified allocations in the same manner the percentage of patronage refunds paid in cash determines the outflow associated with qualified allocations. Table 5-6 presents the length of the revolving period, given the average rate of return to allocated equity for selected levels of cash patronage refunds and rates of growth. For any combination of rate of growth and percentage cash patronage refunds or tax rate, the revolving period is the same for nonqualified as for qualified allocations, as comparing tables 5-4 and 5-6 demonstrates.

Per-Unit Capital Retains

If the cooperative's allocated equity is acquired by per-unit capital retains, the rate of growth in allocated equity and the percentage of allocated equity that can be redeemed each year is determined by the *rate of deduction* of per-unit capital retains. The rate of deduction of retains is current per-unit capital retain deductions expressed as a percentage of total allocated equity.

The percentage of allocated equity that can be redeemed each year equals the rate of deduction of per-unit capital retains less the rate of growth in allocated equity. For revolving fund plans, table 5-7 shows the length of the revolving period, given selected rates of deduction and rates of growth in allocated equity.

Table 5-8 gives estimated average rates of deduction of per-unit capital retains based on allocated equity acquired by per-unit capital retains. These figures were estimated using data from the ACS financial profile studies for the 1970 and 1976 fiscal years. A cooperative with a 17.1-percent average rate of deduction could redeem 3.2 percent of allocated equity each year while growing at 13.9 percent per annum without increasing leverage. If the cooperative operated a revolving fund, the revolving period would be 12.9 years long.

Table 5-6—Length of revolving period for selected cooperative average tax rates and rates of growth in allocated equity, given average rate of return to allocated equity (nonqualified patronage refund allocations)

Average tax rate ¹ (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
	<i>Years</i>					
17.....	4.5	5.2	6.2	7.9	12.3	(2)
20.....	4.6	5.4	6.5	8.5	14.3	(2)
30.....	5.3	6.3	7.9	11.3	(2)	(2)
40.....	6.2	7.6	10.1	18.7	(2)	(2)

¹ Assuming corporate tax rates for taxable years beginning before 1982. Rates for the first 2 brackets were lowered for subsequent taxable years. See Chapter VI for detail.

² At this tax rate and rate of growth, revolvment of equity is impossible, because requirements for growth in allocated equity and income tax equal or exceed the return to allocated equity.

Source: Computed using equations (7a) and (7b) in Appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 34, 49, and 80.

Table 5-7—Length of revolving period for plan consisting of per-unit capital retains for selected rates of deduction and rates of growth in allocated equity

Rate of deduction (percent)	Rate of growth (percent)						
	0	5	10	15	20	25	30
	<i>Years</i>						
5.....	20.0	(1)	(1)	(1)	(1)	(1)	(1)
10.....	10.0	14.2	(1)	(1)	(1)	(1)	(1)
15.....	6.7	8.3	11.5	(1)	(1)	(1)	(1)
20.....	5.0	5.9	7.3	9.9	(1)	(1)	(1)
25.....	4.0	4.6	5.4	6.6	8.8	(1)	(1)
30.....	3.3	3.7	4.3	5.0	6.0	8.0	(1)

¹ At this rate of deduction and rate of growth, revolvment of equity is impossible, because requirements for growth in allocated equity equal or exceed per-unit capital retain deductions.

Source: Computed using equations (11a) and (11b) in appendix D.

Increasing Equity Redemption with Per-Unit Capital Retains

A cooperative that uses retained patronage refunds as its source of eq-

Table 5-8—Estimated average rates of deduction for U.S. farmer cooperatives, fiscal years 1970 and 1976

Type of cooperatives	Estimated rate of deduction based on allocated equity acquired by per-unit capital retains		
	1970	1976	Average
	<i>Percent</i>		
Farm supply ¹	43.1	1.9	22.4
Marketing	16.2	17.7	16.9
Marketing/farm supply	25.5	16.2	20.9
Weighted average	16.8	17.5	17.1

¹ Wide difference between 1970 and 1976 rates of deduction is due in part to small number of observations.

Source: Calculated from Griffin and others, pp. 24, 49, and 101.

uity may be able to accelerate equity redemption by supplementing retained patronage refunds with per-unit capital retains. The increase in the percentage of allocated equity that can be redeemed each year resulting from augmenting retained patronage refunds with per-unit retains would equal the rate of deduction of retains.

Table 5-9 shows the length of the revolving periods for a revolving fund plan consisting of retained patronage refunds and per-unit capital retains for selected rates of deduction and of growth. The table uses the 27-percent average rate of return to allocated equity acquired by retained patronage refunds estimated from the ACS financial profile studies for fiscal years 1970 and 1976. In constructing the table, it was assumed that the cooperative pays the 20-percent minimum level of cash patronage refunds for qualified allocations.

At any rate of growth, a cooperative can shorten its revolving period by initiating per-unit capital retains deductions, indicated in table 5-9 by a positive rate of deduction. Of course, the larger the rate of deduction, the shorter the revolving period would be. However, a retain program with even a modest deduction rate may substantially lower the length of the revolving period, particularly at higher rates of growth.

Table 5-10 shows how per-unit capital retains can be used to supplement retained patronage refunds in reducing the length of a revolving period. The cooperative represented in this table has a revolving fund of \$200,000 in retained patronage refunds, earns a 12.5-percent rate of return to allocated equity, and pays 20 percent of net savings out as cash patronage refunds. Of the \$25,000 in net savings each year, \$20,000 is retained and used to revolve out equity allocations issued 10 years before.

Table 5-9—Length of revolving period for plan consisting of retained patronage refunds and per-unit capital retains for selected rates of deduction and rates of growth in allocated equity¹

Rate of deduction (percent)	Rate of growth (percent)						
	0	5	10	15	20	25	30
<i>Years</i>							
0	4.6	5.4	6.5	8.5	14.3	(2)	(2)
5	3.8	4.3	5.0	5.9	7.7	12.6	(2)
10	3.2	3.5	4.0	4.6	5.5	7.0	11.4
15	2.7	3.0	3.4	3.8	4.3	5.2	6.5
20	2.4	2.6	2.9	3.2	3.6	4.1	4.9
25	2.1	2.3	2.5	2.8	3.1	3.4	3.9
30	1.9	2.1	2.3	2.5	2.7	3.0	3.3

¹ Assuming 20-percent cash patronage refunds.

² At this rate of deduction and rate of growth, revolvment of equity is impossible, because requirements for cash patronage refunds and growth in allocated equity equal or exceed the return to allocated equity and per-unit capital retain deductions.

Source: Computed using equations (19a) and (19b) in Appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80.

In 1981, the cooperative begins to deduct per-unit capital retains. Each year, \$20,000 in capital retains are used to augment the \$20,000 in retained patronage refunds used to revolve equity. Current patrons' commitment to equity financing each year doubles, but twice as much is available for revolving out old equities. The net burden on patrons from financing the cooperative has not increased.

In 1981, the cooperative can begin to retire 2 years' allocations each year. By 1986, use of per-unit retains will have allowed the cooperative to shorten its revolving period from 10 to 5 years. In addition, the cooperative will begin to revolve out the first of the per-unit retain allocations made in 1981.

Special Plans

Table 5-4 can be used to indicate the percentage of allocated equity acquired by retained patronage refunds a cooperative with an average rate of return could redeem through a special plan in the absence of a systematic plan. If a special plan is used in conjunction with a systematic plan, the amount of equity the cooperative could redeem through the systematic plan can be determined by subtracting the percentage to be redeemed on the basis of the cooperative's special plan from the percent-

Table 5-10—Using per-unit capital retains to shorten a revolving period

Year	Allocated equity at beginning of year		Equity retained during year		Equity redeemed		Equity issue(s) redeemed
	Retained patronage refunds	Per-unit capital retains	Retained patronage refunds	Per-unit capital retains	Retained patronage refunds	Per-unit capital retains	
.....1,000 dollars							Years
1979	200	0	20	0	20	0	1969
1980	200	0	20	0	20	0	1970
1981	200	0	20	20	40	0	1971, 1972
1982	180	20	20	20	40	0	1973, 1974
1983	160	40	20	20	40	0	1975, 1976
1984	140	60	20	20	40	0	1977, 1978
1985	120	80	20	20	40	0	1979, 1980
1986	100	100	20	20	20	20	1981
1987	100	100	20	20	20	20	1982

age the cooperative can redeem, given its rate of return, level of cash patronage refunds, and rate of growth.

According to table 5-4, a cooperative with an average rate of return could redeem 6.2 percent of its allocated equity each year through a special plan, while paying 40 percent of patronage refunds in cash and increasing allocated equity by 10 percent annually. If the cooperative redeemed 5 percent of allocated equity each year through a special plan, 1.2 percent could be redeemed through a systematic plan.

Revolving Funds

When a special plan is combined with a revolving fund plan, equity redemption through the special plan reduces the amount of equity available for revolvment. As a result, using a special plan in conjunction with a revolving fund will increase the length of the revolving period.

The length of the revolving period is presented in tables 5-11 and 5-12 for selected levels of cash patronage refunds and rates of growth in allocated equity given the 27-percent average rate of return to allocated equity when 5 and 10 percent of patron equity, respectively, are redeemed annually through a special plan.

These tables were constructed under the assumption that equity redeemed through the special plan comes from each issue of equity in equal proportions, regardless of the age of the allocation. Because most special equity redemption programs presumably redeem a larger proportion of older equity, the length of the revolving fund for each combination of cash patronage refunds and rate of growth probably is understated.

Nevertheless, comparing table 5-11 or 5-12 with table 5-5 demonstrates that using a special plan in conjunction with a revolving fund plan lengthens the revolving period. For example, according to table 5-5, a cooperative with the average rate of return could redeem allocated equity in 10.1 years, while paying 40 percent of its patronage refunds in cash and increasing its allocated equity by 10 percent per annum. According to table 5-11, redeeming 5 percent of patron equity each year through a special plan would increase the length of the revolving period to 17.8 years.

Comparison of Alternative Methods of Distribution

The value to patrons of a cooperative's net savings varies according to how the cooperative distributes them. By considering its tax rate and that of its patrons, a cooperative may be able to select the method of distributing net savings that maximizes the after-tax present value to patrons.

If net savings are distributed as a combination of cash and noncash qualified patronage refund allocations, patrons generally must pay income taxes based on the entire distribution, even though the noncash

Table 5-11—Length of revolving period for selected levels of cash patronage refunds and rates of growth in allocated equity, given 5-percent-per-annum equity redemption through special plan

Patronage refunds paid in cash (percent)	Rate of growth (percent)				
	0	5	10	15	20
	<i>Years</i>				
20.....	5.1	6.2	8.1	13.7	(1)
30.....	6.0	7.5	10.8	(1)	(1)
40.....	7.2	9.6	17.8	(1)	(1)
50.....	9.0	13.5	(1)	(1)	(1)
60.....	12.1	26.1	(1)	(1)	(1)
70.....	18.7	(1)	(1)	(1)	(1)
80.....	50.9	(1)	(1)	(1)	(1)
90.....	(1)	(1)	(1)	(1)	(1)
100.....	(1)	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds and rate of growth, revolvment of equity is impossible, because requirements for cash patronage refunds, growth in allocated equity, and equity redemption through special plan equal or exceed the return to allocated equity.

Source: Calculated using equation (24) in Appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80.

portion is not redeemed in cash until the end of the revolving period. If the percentage patronage refunds paid in cash is lower than the marginal tax rate of patrons, they will pay more in taxes when the distribution is made than they receive in cash. If the revolving period is long enough, the present value of the noncash portion may be negligible. In fact, for some combinations of cash patronage refunds, revolving period, and patron tax and discount rates, the present value of cash/noncash qualified patronage refund allocations may be negative.

Patrons' understanding of the situation has undoubtedly contributed to the pressure on many cooperatives to pay higher cash patronage refunds at the expense of increasing the length of revolving periods. Current patrons are willing to further discount the noncash portions of their distributions in favor of increasing their cash values, particularly in light of the tax treatment of qualified allocations.

A logical extension of a shift to high cash patronage refunds and long revolving periods is for cooperatives to pay 100 percent cash patronage refunds from net savings left after deducting whatever additions to unallocated reserves are necessary to maintain growth in equity capital. In this extreme, net savings withheld from patrons are retained permanently, but patrons do not pay taxes on them. Patrons receive less in total cash

Table 5-12—Length of revolving period for selected levels of cash patronage refunds and rates of growth in allocated equity, given 10-percent-per-annum equity redemption through special plan

Patronage refunds paid in cash (percent)	Rate of growth (percent)			
	0	5	10	15
	<i>Years</i>			
20	5.9	7.7	13.0	(1)
30	7.2	10.3	(1)	(1)
40	9.1	16.9	(1)	(1)
50	12.8	(1)	(1)	(1)
60	24.8	(1)	(1)	(1)
70	(1)	(1)	(1)	(1)
80	(1)	(1)	(1)	(1)
90	(1)	(1)	(1)	(1)
100	(1)	(1)	(1)	(1)

¹ At this level of cash patronage refunds and rate of growth, revolvment of equity is impossible, because requirements for cash patronage refunds, growth in allocated equity, and equity redemption through special plan equal or exceed the return to allocated equity.

Source: Calculated using equation (24) in appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80.

and allocations, but the cooperative, not the patrons, incurs a tax liability on additions to unallocated reserves.

A third alternative is to distribute 100 percent of net savings to patrons in the form of nonqualified patronage refund allocations. Under this alternative, patrons ultimately receive more net savings than under the second method but still enjoy a tax treatment that may benefit them more than qualified allocations. In the case of nonqualified allocations, patrons do not recognize the noncash allocations in determining income taxes, and the cooperative does not deduct them from taxable income. When the allocations are later redeemed in cash, the cooperative deducts the redemptions from its taxable income, and the patrons recognize them for tax purposes.

After-Tax Present Values to Patrons

For the purpose of comparing the after-tax present values to patrons of net savings distributed according to these three methods, they are identified as:

Method A: Net savings distributed as a combination of cash and non-cash qualified patronage refund allocations.

Method B: Net savings distributed as a combination of 100 percent cash patronage refunds and additions to unallocated reserves.

Method C: Net savings distributed as nonqualified patronage allocations.

In the numerical comparison that follows, it is assumed that the cooperative has a 27-percent rate of return to allocated equity or unallocated reserves and that patrons have a 30-percent marginal tax rate and a 12-percent discount rate.

Method A—The after-tax present value to patrons of \$100 net savings distributed as a combination of cash and noncash qualified patronage refund allocations is presented in table 5-13 for selected levels of cash patronage refunds and rates of growth. Table 5-13 corresponds to table 5-4. The revolving period for each combination of patronage refunds paid in cash and rate of growth was used to compute the corresponding present value in table 5-13.

In each column of table 5-4, all combinations of cash patronage refunds and revolving periods provide the same amount of allocated equity capital necessary each year for the rate of growth specified at the head of the column. Thus, for any rate of growth, there is a trade-off between level of cash patronage and length of revolving period.

Although all these combinations of cash patronage refunds and revolving periods supply the same amount of equity capital, their present values to patrons are not equal. At the lower rates of growth shown in table 5-13, the largest present values correspond to combinations of high cash patronage refunds and long revolving periods. At the higher rates of growth, the largest present values are associated with 20-percent minimum level of cash patronage refunds and shorter revolvment.

Figure 5-1 illustrates the relationship between the present value to patrons of patronage refunds and the level of cash patronage refunds. In this figure, the before-tax present values of cash and noncash patronage refunds corresponding to the levels of cash patronage refunds presented in table 5-4 are compared for 0- and 15-percent rates of growth.

In figure 5-1, as cash patronage refunds increase, the present value of noncash patronage refunds declines more rapidly for the 15-percent rate of growth than for the 0 rate of growth. This is because at the 15-percent rate of growth, the length of the revolving period increases more rapidly, as the level of cash patronage refunds increases, as is apparent from table 5-4.

When the present value of noncash patronage refunds is added to the present value of cash patronage refunds in figure 5-1, the present value for the 15-percent rate of growth declines as the level of cash patronage refunds increases. Thus, the 20-percent level of cash patronage refunds has the highest present value. Because the present value of noncash patronage refunds for a 0 rate of growth declines less rapidly as the level

Table 5-13—After-tax present value to patrons of \$100 net savings distributed as a combination of cash and noncash qualified patronage refund allocations (Method A) for selected levels of cash patronage refunds and rates of growth, given 30-percent patron marginal tax rate¹

Patronage refunds paid in cash (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
<i>Dollars</i>						
20.....	37.32	33.38	28.17	<i>20.55</i>	<i>5.77</i>	(2)
30.....	38.41	34.27	28.56	19.42	(2)	(2)
40.....	39.79	35.44	29.12	17.22	(2)	(2)
50.....	41.58	37.05	30.02	(2)	(2)	(2)
60.....	44.00	39.42	<i>31.79</i>	(2)	(2)	(2)
70.....	47.40	43.21	(2)	(2)	(2)	(2)
80.....	52.45	<i>50.05</i>	(2)	(2)	(2)	(2)
90.....	<i>60.15</i>	(2)	(2)	(2)	(2)	(2)
100.....	(2)	(2)	(2)	(2)	(2)	(2)

¹ Figures in italics indicate largest present values for rates of growth.

² At this level of cash patronage refunds and rate of growth, revolvment of equity is impossible, because requirements for cash patronage refunds and growth in allocated equity equal or exceed the return to allocated equity.

Source: Calculated using equation (28) in Appendix D and length of revolving period from table 5-4.

of cash patronage refunds increases, the present value of cash and non-cash patronage refunds rises. Thus, the 90-percent level of cash patronage refunds has the largest present value of the levels shown in Table 5-13 for a 0 rate of growth.

The situations in which combinations of high cash patronage refunds and long revolving periods have the largest present values may present a dilemma to cooperatives wishing to select the best program for their patrons. High cash patronage refunds may be preferable from the perspective of present value, and patrons may be willing to forego early redemption of noncash allocations while they are active. However, once they retire or withdraw, their best interests will be served by early revolvment of patron equities.

Method B—The after-tax present value to patrons of \$100 net savings distributed as a combination of 100 percent cash patronage refunds and additions to unallocated savings is presented in table 5-14 for selected cooperative average tax rates and rates of growth.

For any positive rate of growth, the present value of the distribution declines as the cooperative's tax rate increases. This is because the value of

Figure 5-1

Comparison of Present Values of Cash and Noncash Patronage Refunds for 0 and 15 Percent Rates of Growth in Allocated Equity

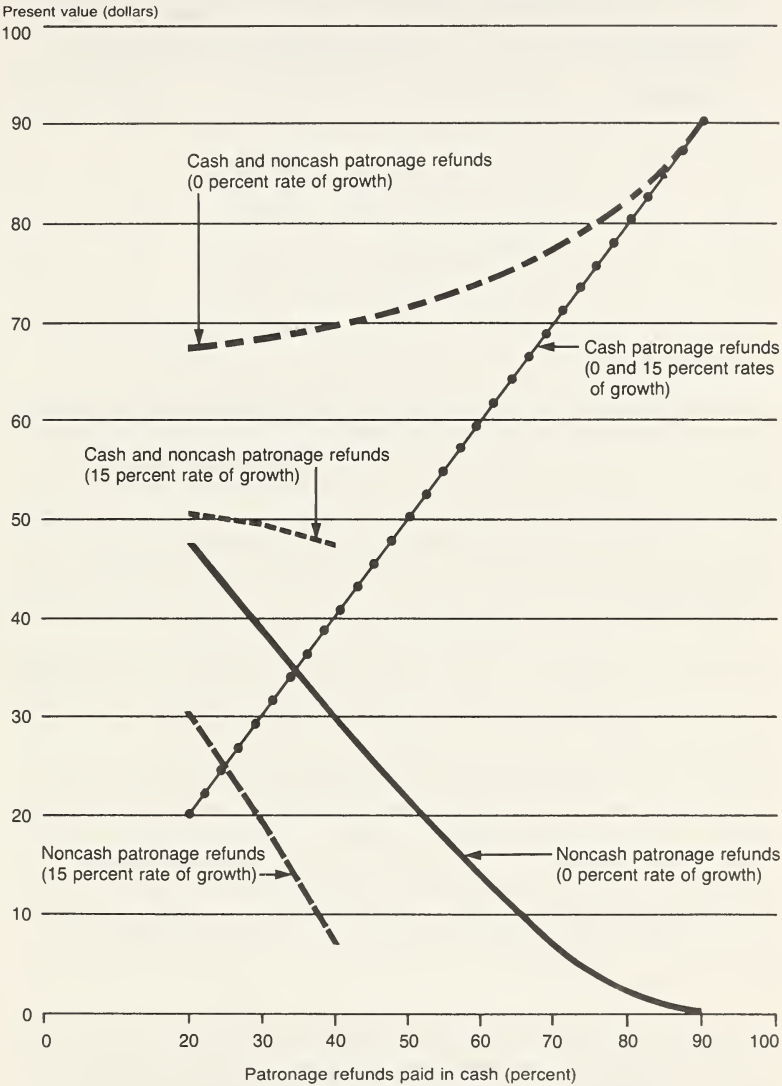


Table 5-14—After-tax present value to patrons of \$100 net savings distributed as a combination of 100 percent cash patronage refunds and additions to unallocated savings (Method B) for selected cooperative average tax rates and rates of growth, given 30-percent patron marginal tax rate

Cooperative average tax rate ¹ (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
<i>Dollars</i>						
17.....	70.00	54.37	38.74	23.11	7.48	(2)
20.....	70.00	53.78	37.57	21.35	5.14	(2)
30.....	70.00	51.47	32.94	14.40	(2)	(2)
40.....	70.00	48.38	26.76	5.14	(2)	(2)

¹ Assuming corporate tax rates for taxable years beginning before 1982.

² At this cooperative tax rate and rate of growth, payment of cash patronage refunds is impossible, because requirements for growth in unallocated reserves and income tax equal or exceed the return to unallocated reserves.

Source: Calculated using equation (28) in appendix D and 27-percent average rate of return to allocated equity acquired by retained patronage refunds calculated from Griffin and others, pp. 24, 49, and 80 as rate of return to unallocated reserves.

cash refunds diminishes as more funds must be retained to pay cooperative taxes. Similarly, the present value decreases as the rate of growth increases, because more unallocated reserves must be retained for growth.

Method C—The after-tax present value to patrons of \$100 net savings distributed as nonqualified patronage refund allocations is presented in table 5-15 for selected cooperative average tax rates and rates of growth. Table 5-14 corresponds to table 5-6. The revolving period for each combination of cooperative tax rate and rate of growth was used to compute the corresponding present value in table 5-15. As with Method B, the present value of the distributions declines as the cooperative tax rate or rate of growth increases.

Comparison of Methods—Table 5-16 compares Methods A, B, and C for selected cooperative and patron tax rates at a 13.9-percent rate of growth. Combining cash and noncash qualified patronage refund allocations gives patrons the highest present values for low patron marginal tax rates and high cooperative average tax rates. Nonqualified allocations give patrons the highest present values for high patron tax rates and low cooperative tax rates. Combining 100 percent cash patronage refunds with additions to unallocated reserves never results in the largest present value to patrons.

A comparison of the formulas in table D-7, however, reveals that the

Table 5-15—After-tax present value to patrons of \$100 net savings distributed as nonqualified patronage refund allocations (Method C) for selected cooperative average tax rates and rates of growth, given 30-percent patron marginal tax rate

Cooperative average tax rate ¹ (percent)	Rate of growth (percent)					
	0	5	10	15	20	25
<i>Dollars</i>						
17.....	42.20	38.92	34.64	28.50	17.44	(2)
20.....	41.41	37.96	33.40	26.73	13.80	(2)
30.....	38.41	34.27	28.56	19.42	(2)	(2)
40.....	34.76	29.68	22.31	8.42	(2)	(2)

¹ Assuming corporate tax rates for taxable years beginning before 1982.

² At this cooperative tax rate and rate of growth, revolvment of equity is impossible, because requirements for growth in allocated equity and income tax equal or exceed the return to allocated equity.

Source: Calculated using equation (29) in appendix D and length of revolving period from table 5-6.

after-tax present value is sensitive to changes in the patron discount rate under Methods A and C but not under Method B. Increasing the discount rate lowers the present values for Methods A and C but not for Method B.

Table 5-17 compares Methods A, B, and C under a 15-percent patron discount rate. The combination of cash and noncash qualified patronage refund allocations again gives patrons the highest present values for low patron marginal tax rates and high cooperative average tax rates. However, nonqualified allocations no longer give patrons the highest present values for low patron tax rates and high cooperative tax rates. Instead, for these tax rates, combining 100 percent cash patronage refunds with additions to unallocated reserves gives patrons the largest present values.

Per-Unit Capital Retains

Similar analyses can be performed for per-unit capital retains, which can be allocated either as qualified or nonqualified. These alternatives are identified as:

Method D: Per-unit capital retains allocated in qualified form.

Method E: Per-unit capital retains allocated in nonqualified form.

In the numerical comparisons that follow, it is assumed that the cooperative has a rate of deduction of 17.1 percent and that patrons have a

Table 5-16—Comparison of present values to patrons of \$100 net savings under Methods A, B, and C for selected cooperative and patron tax rates, given 12-percent patron discount rate¹

Cooperative average tax rate (percent)	Method of distri- bution	Patron marginal tax rate (percent)				
		10	20	30	40	50
<i>Dollars</i>						
17	A	42.47	32.47	22.47	12.47	2.47
	B	33.95	30.18	26.41	22.63	18.86
	C	38.61	34.32	30.03	25.74	21.45
20	A	42.47	32.47	22.47	12.47	2.47
	B	31.85	28.31	24.77	21.23	17.69
	C	36.53	32.47	28.41	24.35	20.29
30	A	42.47	32.47	22.47	12.47	2.47
	B	23.54	20.93	18.31	15.69	13.08
	C	28.10	24.98	21.85	18.73	15.61
40	A	42.47	32.47	22.47	12.47	2.47
	B	12.46	11.08	9.69	8.31	6.92
	C	16.18	14.38	12.58	10.79	8.99

¹ Figures in italics indicate largest present values for cooperative and patron tax rates.

Source: Calculated using equations (27) through (29) in appendix D, length of revolving period from tables 5-4 and 5-6, and 27-percent average rate of return to allocated equity acquired by retained patronage refunds and 13.9-percent rate of growth calculated from Griffin and others, pp. 24, 49, and 80.

30-percent marginal tax rate and a 12-percent discount rate.

Method D—The after-tax present value to patrons of \$100 per-unit capital retains allocated in qualified form is presented in table 5-18 for selected rates of growth. The higher the rate of growth, the longer the revolving period, and thus the smaller the present value of the allocation to patrons. Although not shown in table 5-18, the present value of \$100 per-unit capital retains allocated in qualified form is -\$6.86 for a 13.9-percent rate of growth.

Method E—The after-tax present value to patrons of \$100 per-unit capital retains allocated in nonqualified form is presented in table 5-19 for selected cooperative average tax rates and rates of growth. As with non-qualified patronage refund allocations, the present value of the allocation declines as the cooperative tax rate and the rate of growth increases. Although not shown in table 5-19, the present value of \$100

Table 5-17—Comparison of after-tax present values to patrons of \$100 net savings under Methods A, B, and C for selected cooperative and patron tax rates, given 15-percent patron discount rate^{1,2}

Cooperative average tax rate (percent)	Method of distribution	Patron marginal tax rate (percent)				
		10	20	30	40	50
<i>Dollars</i>						
17.....	A	38.22	28.22	18.22	8.22	(1.78)
	B	33.95	30.18	26.41	22.63	18.86
	C	31.69	28.17	24.65	21.13	17.61
20.....	A	38.22	28.22	18.22	8.22	(1.78)
	B	31.85	28.31	24.77	21.23	17.69
	C	29.60	26.31	23.02	19.73	16.44
30.....	A	38.22	28.22	18.22	8.22	(1.78)
	B	23.54	20.93	18.31	15.69	13.08
	C	21.42	19.04	16.66	14.28	11.90
40.....	A	38.22	28.22	18.22	8.22	(1.78)
	B	12.46	11.08	9.69	8.31	6.92
	C	10.84	9.64	8.43	7.23	6.02

¹ Figures in parentheses indicate negative values.

² Figures in italics indicate maximum present values for cooperative and patron tax rates.

Source: Computed using equations (29) through (30) in Appendix D, length of revolving period from tables 5-4 and 5-6, and 27-percent average rate of return to allocated equity acquired by retained patronage refunds and 13.9-percent rate of growth calculated from Griffin and others, pp. 24, 49, and 80.

per-unit capital retains allocated in nonqualified form is \$2.17 for a cooperative tax rate of 17 percent, given a 13.9-percent rate of growth. At higher cooperative tax rates and this rate of growth, redemption of nonqualified capital retain allocations is impossible, because requirements for growth in revolving equity and income tax equal or exceed per-unit retain deductions.

Comparison of Methods—Table 5-20 compares Methods D and E for selected cooperative and patron tax rates at a 13.9-percent rate of growth. Per-unit capital retain allocations made in qualified form provide the highest present values for low patron marginal tax rates and high cooperative average tax rates just as for qualified patronage refund allocations. Per-unit capital retain allocations made in nonqualified form give patrons the highest present values for high patron tax rates and low cooperative tax rates.

Table 18—After-tax present value to patrons of \$100 per-unit capital retains allocated in qualified form (Method D) for selected rates of growth, given 30-percent patron marginal tax rate^{1,2}

Rate of growth	Present value ²
<i>Percent</i>	<i>Dollars</i>
0	21.58
5	14.82
10	5.22
15	(11.64)
20	(2)

¹ Figure in parentheses indicates negative value.

² At this rate of growth, revolvment of equity is impossible, because requirements for growth in allocated equity equal or exceed per-unit capital retain deductions.

Source: Computed using equations (11a), (11b) and (30) in appendix D and 17.1-percent average rate of deduction of per-unit capital retains based on allocated equity acquired by per-unit capital retains, calculated from Griffin and others, pp. 24, 49, and 101.

Table 5-19—After-tax present value to patrons of \$100 per-unit capital retains allocated in nonqualified form (Method E) for selected cooperative average tax rates and rates of growth, given 30-percent patron marginal tax rate

Cooperative average tax rate ¹ (percent)	Rate of growth (percent)			
	0	5	10	15
	<i>Dollars</i>			
17	31.52	25.56	16.47	(2)
20	30.60	24.36	14.74	(2)
30	27.18	19.96	8.24	(2)
40	23.22	14.86	0.92	(2)

¹ Assuming corporate tax rates for taxable years beginning before 1982.

² At this cooperative tax rate and rate of growth, revolvment of equity is impossible, because requirements for growth in allocated equity and income tax equal or exceed per-unit capital retain deductions.

Source: Computed using equations (15a) (15b) and (31) in appendix D and 17.1-percent average rate of deduction of per-unit capital retains based on allocated equity acquired by per-unit capital retains, calculated from Griffin and others, pp. 24, 49, and 101.

Table 5-20—Comparison of after-tax present values to patrons of \$100 per-unit capital retains under Methods D and E for selected cooperative and patron tax rates given 12-percent patron discount rate^{1,2}

Cooperative average tax rate (percent)	Method	Patron marginal tax rate (percent)				
		10	20	30	40	50
<i>Dollars</i>						
17.....	D	<i>13.14</i>	<i>3.14</i>	(6.86)	(16.86)	(26.86)
	E	2.79	2.48	2.17	1.86	1.55
20.....	D	<i>13.14</i>	<i>3.14</i>	(6.86)	(16.86)	(26.86)
	E	(3)	(3)	(3)	(3)	(3)
30.....	D	<i>13.14</i>	<i>3.14</i>	(6.86)	(16.86)	(26.86)
	E	(3)	(3)	(3)	(3)	(3)
40.....	D	<i>13.14</i>	<i>3.14</i>	(6.86)	(16.86)	(26.86)
	E	(3)	(3)	(3)	(3)	(3)

¹ Figures in italics indicate largest present values for cooperative and patron tax rates.

² Figures in parentheses indicate negative values.

³ At this cooperative average tax rate, redemption of nonqualified per-unit capital retain allocations is impossible, because requirements for growth in allocated equity and income tax equal or exceed per-unit capital retain deductions.

Source: Computed using equations (11a), (11b), (15a), (15b), (30), and (31) in appendix D and 17.1-percent average rate of deduction of per-unit capital retains based on allocated equity acquired by per-unit capital retains and 13.9-percent rate of growth calculated from Griffin and others, pp. 24, 49, and 101.

VI. LEGAL AND TAX ASPECTS

Legal aspects of equity redemption are governed by three bodies of law—Federal and State statutes and the common law (judicial decisions based on statutes, precedents, and customs). On the Federal level, the most important statute for equity redemption is the Internal Revenue Code. This statute establishes the proper Federal tax treatment of patronage refunds for patrons and cooperatives.

Most agricultural cooperatives are incorporated. No Federal statute provides for the incorporation of agricultural cooperative marketing and supply associations; instead, such associations are incorporated under State statutes. These statutes and, to a lesser extent, the common law contain important equity redemption rules, which are binding on cooperative members and boards of directors.

The first section in this chapter highlights the proper tax treatment of issuance and redemption of patronage refunds and also analyzes how non-qualified allocations and the investment tax credit can improve a cooperative's equity redemption performance. The second and third sections present equity redemption rules from State statutes and the common law. They also discuss recent amendments to State equity redemption laws. Both sections address the same subject matter; the third section is designed for readers with legal training; the second, for other readers.

The last section focuses on the equity redemption responsibility of the board of directors; it defines and analyzes its duty to redeem members' equity.

Taxation

The tax treatment available to cooperatives reflects the special role of patronage equity in cooperative finance. Federal tax laws and policies encourage using retained patronage refunds as a source of equity capital by giving special tax deductions to cooperatives that allocate their earnings to their patrons. Although more attention is usually given to the issuance of patronage equity, both equity issuance and equity redemption may have important tax consequences.

This discussion explores some aspects of Federal income taxation that can facilitate equity redemption. A brief history of the taxation of cooperatives is followed by a review of the current law, including changes adopted in the Economic Recovery Tax Act of 1981. Examples will be given of specific techniques that can help some cooperatives with their equity redemption programs.

Development of the Law

Two related but separate issues in the taxation of cooperatives are the "cooperative exemption" from Federal income tax and the exclusion of patronage refunds from a cooperative's income for Federal income tax

purposes. Since the early part of this century, Congress has specifically exempted from Federal income tax those cooperatives that meet certain requirements. However, until 1951 no Federal statute specifically excluded patronage refunds from Federal taxes.

Patronage refunds are a major source of equity capital for cooperatives. They are issued in the form of stock, equity certificates, or other documents. The tax treatment of patronage refunds is then the tax treatment of cooperative equity issuance and redemption.

Early Rulings—Long before a Federal statute expressly excluded patronage refunds, the Treasury Department and the Internal Revenue Service had allowed the exclusion under certain conditions.¹ This practice had been recognized and approved by the courts.² The first Treasury Department ruling on the subject was not based on any specific statutory authority. "This ruling is in accordance with settled practice in the administration of the income tax laws, adopted because the real purpose of such organizations is to furnish goods at cost."³

Although some of the early rulings concerned whether patronage refunds were to be deducted rather than excluded⁴— a rather technical distinction — the fundamental question is "whether they (patronage refunds) constitute income to the cooperative, or to the patrons, or to both ..."⁵

The 1951 Act—This longstanding administrative practice received Congressional approval in 1951, when the tax exemption enjoyed by some farmer cooperatives was removed.⁶ Cooperatives formerly exempt from taxation were authorized to take some additional tax deductions, but their patronage refunds paid to patrons had to "be taken into account in computing taxable income in the same manner as in the case of a cooperative organization not exempt under (section 521)."⁷ While not mentioning explicitly the treatment given to nonexempt cooperatives, Congress ratified nearly 40 years of administrative practice.

The cooperative's tax treatment is only half the story. The way patrons are taxed on the patronage refunds they receive completes the picture of single taxation of cooperative net savings. At the time of the 1951 Act, payments received from a cooperative (which were deducted from the cooperative's income) were generally treated as income to the patrons.⁸ This simultaneous shift of tax burdens from cooperative to patron assures that one tax, and only one tax, is paid on the earnings allocated to patrons. It was this complementary taxation that formed the basis of the Federal tax treatment of cooperatives, but it was temporarily thrown awry by two U.S. Court of Appeals decisions.

Similar issues were presented in both cases. The fundamental question in each was: How much income must patrons recognize if their refunds were paid in certificates rather than in cash? The first case, involving a cash-basis patron, held that only the fair market value, rather than the face value of certificates or other noncash property was considered income.⁹ If the fair market value was found to be zero, which was

likely,¹⁰ the patron received no income. The income would be recognized only when the patron's equities were redeemed in cash. The second case reached a similar result in the case of an accrual-basis patron.¹¹

As a result of these decisions, cooperatives could deduct patronage refunds issued in noncash forms, but patrons would not recognize them as income until the time of redemption. Thus, the single tax was replaced by no tax at all.

Subchapter T

This situation lasted until 1962, when Congress added Subchapter T to the Internal Revenue Code.¹² Subchapter T codified several requirements that had been imposed on cooperatives seeking to deduct patronage refunds and restored the single tax treatment by providing rules for taxing patrons when they receive noncash patronage refunds.

The code provides two alternatives for cooperatives making noncash distributions of earnings: Qualified written notices of allocation and non-qualified written notices. Both methods result in single taxation of retained patron equities. Both methods allow patrons and cooperatives some degree of flexibility in planning their business affairs. And both methods spell out the tax consequences faced by both parties. The methods differ in the timing of these tax consequences.

When a cooperative issues patronage refunds in cash or qualified written notices, it deducts the amount from its gross income.¹³ Patrons usually (but not always) recognize receipt of the earnings by including them in their income.¹⁴ When the qualified notices are redeemed, there are no further tax consequences to cooperative or patron.

However, when a cooperative issues nonqualified written notices, it does not receive a deduction, and the patron does not recognize any income. Instead the cooperative pays Federal income tax on its earnings. The cooperative and the patron both wait until equities are redeemed to recognize the noncash portion of the refund for tax purposes.¹⁵

The cooperative's tax liability in the year it redeems nonqualified refunds is the smaller of two separately calculated amounts. The first amount is the tax on the current year's earnings, after deducting the amount of nonqualified equities redeemed. The second amount is the tax on the current year's earnings without deducting the equities redeemed, minus the increase in prior years' taxes that resulted solely from treating the redeemed equities as nonqualified rather than qualified. This rule allows the cooperative to recover the additional taxes it paid due to issuing nonqualified refunds. If the second amount is less than zero (indicating a negative tax liability or an overpayment of taxes), the cooperative can get that amount as a tax refund.¹⁶

The corporate tax rate reductions enacted in the Economic Recovery Tax Act of 1981 may cause many cooperatives to use the second branch of

the calculation. The new corporate tax rates are shown in table 6-1.

Table 6-2 illustrates the effect of redeeming nonqualified allocations. Suppose a cooperative issues nonqualified allocations in 1981. If in 1985 the cooperative redeems these allocations, its income tax for the year is the smaller of the two calculations shown in table 6-2. First, if the cooperative deducts the allocations redeemed from its 1985 net savings of \$120,000, its taxable income is \$20,000. The tax on this amount is \$3,000.

The second calculation disregards the amount of nonqualified equity redeemed. Instead, the cooperative reduces its 1985 income tax by the amount its 1981 income tax was increased as a result of issuing its allo-

Table 6-1—Corporate tax rates

Taxable income		Taxable years beginning in		
Over	But not over	1981 and before	1982	1983 and after
<i>Dollars</i>		<i>Percent</i>		
0	25,000	17	16	15
25,000	50,000	20	19	18
50,000	75,000	30	30	30
75,000	100,000	40	40	40
100,000		46	46	46

Table 6-2—Computing cooperative income tax when nonqualified allocations are redeemed

	Deduction applied to taxable income of year in which allocation—	
	Redeemed	Issued
<i>Dollars</i>		
1985 taxable net savings	120,000	120,000
Redemption of 1981 nonqualified allocations applied to 1985 taxable income	-100,000	—
1985 taxable income	20,000	120,000
Income tax based on 1985 taxable income	3,000	34,950
Increase in 1981 tax due to nonqualified allocations	—	-26,750
1985 income tax	3,000	8,200

cations in nonqualified form. The cooperative's 1985 taxable net savings (without a deduction for the nonqualified allocations redeemed) are \$120,000, and the tax on this amount is \$34,950. The increase in 1981 taxes resulting from issuing nonqualified refunds was \$26,750. Thus, in this calculation, the cooperative's 1985 income tax would be \$34,950 less \$26,750, or \$8,200.

Because the cooperative would pay less income tax by deducting the redemption of the 1981 nonqualified allocations from its 1985 taxable income, the first computation is used, and the cooperative's 1985 income tax is \$3,000. This computation results in the lowest income tax, because the deduction is taken in the year the cooperative is in the highest tax bracket. Cooperatives should therefore consider increasing their redemption of nonqualified allocations in years their taxable incomes are unusually high.

Timely payment of patronage refunds is a prerequisite to single-tax treatment of cooperative earnings.¹⁷ Patronage refunds for a given year must be issued or allocated within the 20 1/2-month payment period beginning on the first day of the year and ending on the 15th day of the 9th month following the close of the year (e.g., for calendar year 1980, the payment period is January 1, 1980 to September 15, 1981).¹⁸ Both the cooperative and the patron pay taxes on payments made after the payment period has ended.

A further prerequisite for single-tax treatment of noncash patronage refunds is written notification to the patron during the payment period.¹⁹ If the cooperative merely allocates its earnings on its books, it is ineligible for single-tax treatment of those refunds. The written notice can be almost any kind of document the cooperative chooses: a certificate of equity or of indebtedness, capital stock, a revolving fund certificate, or a letter of advice. Whatever form it is in, however, it must disclose to patrons the dollar amount allocated to them and the portion, if any, that constitutes a patronage refund.²⁰

Patronage refunds may be paid in forms other than written notices of allocation and money. Such other property is treated like cash. Both the cooperative and the patron must recognize the property at its fair market value when it is issued.²¹

Whether a written notice is qualified or nonqualified depends on whether the patron consents to take into account for tax purposes the full face value of the written notice.²² A patron consents either by agreeing in writing or by joining or remaining in the organization after it has adopted a bylaw that states membership in the cooperative constitutes consent. The second method applies only if the member has received written notice and a copy of the bylaw provision.

A cooperative also can get a patron's consent by issuing part of a patronage refund as a qualified check containing a statement that endorsing and cashing it constitutes consent. The consent is effective, if the pa-

tron cashes the qualified check within 90 days after the close of the payment period for the year of patronage.²³

A further requirement for qualified patronage refunds is that at least 20 percent of the refund must be paid in cash or by qualified check. A cooperative is free to pay more than 20 percent, but if it pays less, the refund is nonqualified.²⁴ There is no mandatory cash payout associated with issuing nonqualified allocations, and paying more than 20 percent in cash will not turn nonqualified refunds into qualified ones, unless patrons have consented properly.

The following examples illustrate the impact of tax laws on equity redemption programs.

Table 6-3 compares qualified and nonqualified allocations. In 1981, the cooperative in this example earns \$100,000 net savings. If the cooperative allocates net savings as qualified patronage refunds, it will have no taxable income in 1981. However, if it allocates its net savings as nonqualified patronage refunds, the allocations are taxable and the cooperative must pay \$26,750 income tax—\$6,750 more than the 20-percent cash portion of the qualified patronage refunds.

Nonqualified allocations will not be equally attractive to all cooperatives. Cooperatives in high tax brackets may choose not to incur the extra cash outlay that nonqualified refunds can require. Cooperatives whose members are in high tax brackets may issue nonqualified allocations to delay the members' tax liabilities until the patronage equities are redeemed. Some cooperatives may find advantages in issuing part of their patronage equities as qualified and part as nonqualified, or giving each

Table 6-3—Comparison of tax impact on cooperative issuing qualified and nonqualified allocations

	Patronage refund allocations allocated as—	
	Qualified	Nonqualified
<i>Dollars</i>		
1981 net savings	100,000	100,000
Qualified patronage refund allocations	<u>-100,000</u>	<u>-0</u>
Taxable income	0	100,000
Nonqualified patronage refund allocations.	0	100,000
Income tax	0	26,750
Cash portion of patronage refunds	20,000	0
Total cash outlay by cooperative.	20,000	26,750

member the option to choose whether his or her allocation will be qualified or nonqualified. Before a cooperative tries to issue nonqualified allocations, however, its attorney should review its charter and bylaws to remove any potential obstacles to using nonqualified patronage equities.

Notice that in table 6-3, column 2, the entire \$100,000 net savings in 1980 is allocated as nonqualified patronage refunds. Some cooperatives that issue nonqualified allocations allocate only the portion of net savings remaining after taxes. If the cooperative in this example followed this practice, it would allocate only \$73,250 (\$100,000-26,750). Therefore, in 1985, when the cooperative redeems the allocations, it could deduct only \$73,250 from taxable income. Its 1985 income tax would be \$6,915—\$3,915 more than if the cooperative had allocated its entire 1981 net savings as nonqualified allocations.

Patrons in higher tax brackets may benefit from nonqualified allocations. This is shown in table 6-4, which compares the cash flows to the cooperative's patrons resulting from qualified and nonqualified allocations.

Assume the cooperative's average patron is in the 30-percent tax bracket. If the cooperative allocates its 1981 net savings in the form of qualified allocations, its patrons receive \$100,000 in patronage refunds of which only \$20,000 is in cash. Because the patrons are taxed on the entire allocations including the noncash portions, their income taxes on the alloca-

Table 6-4—Patron cash flows—qualified versus nonqualified allocations

	Patronage refund allocations allocated as—	
	Qualified	Nonqualified
<i>Dollars</i>		
1981:		
Patronage refund allocations	100,000	100,000
Cash portion	20,000	0
Income tax (at 30 percent rate)	-30,000	0
Cash flow to patrons, 1981	(10,000)	0
1985:		
Noncash patronage refund allocations redeemed	80,000	100,000
Income tax (at 30 percent rate)	0	-30,000
Cash flow to patrons, 1985	80,000	70,000
Net cash flow to patrons, 1981-85	70,000	70,000

tions equal \$30,000, resulting in a negative cash flow of \$10,000. In 1985, when the noncash portions of the allocations are redeemed, the patrons receive \$80,000 on which they have already paid taxes.

If the cooperative allocates its 1981 net savings as nonqualified allocations, its patrons receive no cash from the allocations in 1980, but neither do they pay income taxes on them. Thus, a negative cash flow is avoided.

In 1985, when the allocations are redeemed in cash, the patrons must include the \$100,000 in redemptions in taxable income and pay \$30,000 in taxes. Nevertheless, they receive a positive net cash flow of \$70,000.

Investment Tax Credit

Tax credits can be a significant tax planning tool for anyone, but cooperatives have the additional option of using them to help their equity redemption programs.

Special-purpose tax credits encourage particular types of activities or business transactions. Some examples include hiring certain hard-to-employ workers,²⁵ purchasing certain kinds of energy-saving devices for home or business,²⁶ and investing in certain types of property for use in trade or business.²⁷

Tax credits are direct dollar-for-dollar reductions in Federal income taxes. They are similar to deductions used in calculating taxable income, in that they reduce total tax liability. However, a deduction is more valuable to a high tax bracket taxpayer than to one in a low bracket, while a tax credit gives both the same tax reduction. In the case of cooperatives, tax credits offer advantages that deductions cannot match.

Generally speaking, cooperatives can enhance their equity redemption programs by using tax credits to reduce the amount of cash used for paying taxes and applying the cash thus saved toward redeeming outstanding equities. The remainder of this chapter will discuss this technique and provide examples that demonstrate how a cooperative can meet two somewhat contradictory goals: improve its equity redemption program and maintain its level of cash payouts to current patrons. This will be presented in the context of the investment credit, probably the most significant tax credit available to cooperatives.

The investment tax credit rewards investment in certain kinds of business property. Businesses that invest in qualified property (called section 38 property) receive a credit of up to 10 percent of the amount spent on section 38 property during the year.²⁸ Before adoption of the Economic Recovery Tax Act of 1981, the amount of the credit depended on the useful life of the property for depreciation purposes. Under the Accelerated Cost Recovery System (ACRS) adopted in the new tax act, most business property placed in service after 1980 is depreciated in 3, 5, or 10 years, and the amount of investment credit depends on the ACRS

period of the property. Eligible property with an ACRS period of 5 years or longer receives a credit of 10 percent. Property with a period of 3 years is eligible for a 6-percent credit.²⁹

Several categories of property qualify for the investment tax credit, and different rules apply to each. Regardless of the category, the property must be tangible property subject to depreciation (or amortization in lieu of depreciation)³⁰; that is, it must be used in the taxpayer's trade or business.

The definition of qualifying property appears in section 48 of the Internal Revenue Code. Although the definition is difficult to summarize, the qualified property of greatest interest to farmers and cooperatives includes the following:

1. Tangible personal property (other than an air conditioning or heating unit);
2. Other tangible property (not including a building and its structural components), if such property:
 - (a) Is used as an integral part of manufacturing, production, or extraction or of furnishing transportation, communications, electrical energy, gas, water, or sewage disposal services;
 - (b) Constitutes a research facility used in connection with any of the preceding activities; or
 - (c) Constitutes a facility used in connection with any of the preceding activities for the bulk storage of fungible commodities;
3. Livestock (other than horses), subject to adjustment, if substantially identical livestock is sold within 6 months before or after the livestock is purchased. Horses are not treated as qualified property;
4. Single-purpose agricultural or horticultural structures. These are livestock structures specifically designed, constructed, and used for housing, raising, and feeding a particular type of livestock (including poultry) and their produce, and for housing the equipment necessary for such housing, raising, and feeding. Qualifying structures also include greenhouses specifically designed, constructed, and used to commercially produce plants and similar structures used in producing mushrooms.

Qualifying property may be either new or used. The entire amount of new qualifying property is subject to the investment credit. Only \$125,000 of used property (\$150,000 for tax years beginning after 1984) may qualify for the credit each year. If investments in used property exceed that limit, the taxpayer must choose the items that will receive investment credit, up to the ceiling (\$125,000 or \$150,000) applicable to the year of investment.³¹

There is a ceiling on the total amount of investment credit that can be used in any year. The ceiling depends solely on the amount of tax that would otherwise be due. Investment credit can be applied against the first \$25,000 of tax liability, and against a percentage of the tax above \$25,000. The percentage is 80 percent for tax years ending in 1981 and 90 percent afterwards. This compares with 60 percent before 1979 and 70 percent in 1979.³²

Investment credits that cannot be used because of this ceiling are not lost. However, cooperatives handle the unusable credits differently than other businesses. Noncooperatives use the credits in other years; cooperatives must pass these on to their patrons.

Noncooperatives (including patrons of cooperatives) can carry them back to the previous 3 years and forward to the 15 subsequent years until they are used up. The carrybacks and carryforwards must be used up on a first-in, first-out basis.³³

Cooperatives, following a change in the laws enacted in 1978, are not permitted to use the carryback and carryforward rules. Instead, they first must use all the investment credit they earn in the current year, subject to the ceiling. Any credits left over are passed through to their patrons.³⁴ Although the tax code itself is silent on the way cooperatives must allocate the investment tax credit, the Conference Committee report on the 1978 Act stated that cooperatives are expected to use the same method they use for patronage refunds. The Internal Revenue Service has not yet issued regulations to implement this rule, however.

The investment tax credit can be used as a valuable tax-planning tool to facilitate equity redemption programs, as illustrated in the following examples.

Table 6-5 shows the use of the investment tax credit. The cooperative represented in the table made a \$600,000 qualified investment with an ACRS period of 10 years during the tax year ending in 1982. It has accumulated investment credit equal to \$60,000, or 10 percent of the 1982 investment in qualified property.

The cooperative has a tax liability of \$30,000. The maximum amount of taxes that can be offset by investment credit is \$25,000 plus 90 percent (80 percent for tax years ending in 1981) of the taxes over \$25,000, for a total of \$29,500. This leaves \$500 tax liability remaining. The unused \$30,500 credit is passed through to the cooperative's patrons according to patronage, for their own use.

Table 6-6 illustrates how a cooperative may use tax credits to benefit its equity redemption program. The cooperative represented in the table has allocated \$100,000 net savings and wishes to issue 35 percent of its patronage refunds in cash. It has set aside \$35,000 for this purpose.

However, as a result of its own investments and a pass-through of in-

Table 6-5—Computation of investment tax credit for cooperative

	<i>Dollars</i>
Qualified investment made in 1982	600,000
Investment tax credit rate	x.10
Investment tax credit.	60,000
Income tax liability before investment tax credit.	30,000
First \$25,000 of tax liability	25,000
90 percent of tax greater than \$25,000 (90 percent of \$5,000)	+ 4,500
Investment tax credit allowable in current tax year.	29,500
Income tax after investment tax credit (\$30,000-29,500).	500
Investment tax credit allocated to patrons (\$60,000-29,500).	30,500

vestment tax credit from its regional cooperative, it has \$15,000 of investment credit available for pass-through to its patrons. Because only the current patrons will receive the credit, the cooperative must decide

Table 6-6—Use of investment tax credit in equity redemption

		With investment credit	
		Plan I (Current patrons get \$35,000 cash)	Plan II (Current patrons get \$20,000 cash)
		<i>Dollars</i>	
Qualified patronage refund allocations	100,000	100,000	100,00
Cash portion (percent).	35	35	20
(dollars)	35,000	35,000	20,000
Pass-through of investment tax credit	+ 0	+ 15,000	+ 15,000
Total cash and credit to current patrons	35,000	50,000	35,000
Additional equity redemption . .	0	0	15,000
Total cash outlay by cooperative	35,000	35,000	35,000

whether to give them the \$35,000 set aside for cash refunds (Plan I), or divide the money between cash patronage refunds and equity redemption (Plan II).

In Plan I, current patrons receive \$35,000 in cash plus the pass-through of investment credit, for a total of \$50,000 of benefits. The total cash outlay of the cooperative is \$35,000.

Plan I gives current patrons the entire benefit of the investment credit earned from the current year's investment, although both past and future patrons may have to finance it. A cooperative might decide that it is more equitable to share the benefits of an investment credit with patrons of other years.

Using Plan II, the cooperative can redeem additional patron equity without increasing its total cash outlay and without decreasing the current patrons' benefits below 35 percent of the current year's allocation. Plan II simply represents a different way to distribute the same amount of cash. Current patrons receive 20 percent of their allocated savings, or \$20,000 in cash, plus the investment credit of \$15,000 for a total of \$35,000 in benefits. The remaining \$15,000 in cash is used to redeem additional equities.

In both Plan I and Plan II, the cooperative can provide its patrons with a tax credit, which is equivalent to cash, at no cost to itself. The difference between the two plans lies in the distribution of the funds freed up by this "free money." In Plan I, it goes to current patrons, while Plan II uses it for equity redemption.

Of course, the investment tax credit received by a patron is equivalent to cash only if the patron can use the credit. Patrons with net operating losses or investment tax credit from other sources may be unable to use pass-through credit in the tax year in which they receive it because of the limitation on the amount of tax liability against which investment tax credit can be applied. However, because of the liberal carryover provisions, these patrons should be able to use the pass-through credit in other years.

Investment tax credit gives a cooperative an opportunity to retain additional unallocated savings, while taxes are offset by the credit. The unallocated savings can be used either to replace allocated equities or to increase the cooperative's capital base, thus giving future patrons some of the benefits of the investment credit. In addition, a cooperative can improve its cash flow by using investment tax credit with reasonable unallocated savings.

For example, the cooperative represented in table 6-7 has current net savings of \$100,000 and has earned \$6,000 in investment tax credit. The average patron is in the 30-percent tax bracket, and the cooperative distributes 20 percent of its patronage refunds in cash.

Table 6-7—Use of investment tax credit and unallocated savings by cooperative

	Plan I (Investment tax credit used to increase unallocated savings)	Plan II (Investment tax credit passed through to patrons)
	<i>Dollars</i>	
<i>Cooperative</i>		
Net savings	100,000	100,000
Qualified patronage refund allocations . .	<u>-62,500</u>	<u>-100,000</u>
Taxable income	37,500	0
Income tax before investment tax credit ¹	6,000	0
Investment tax credit used	<u>-6,000</u>	<u>-0</u>
Income tax paid by cooperative	0	0
Noncash patronage refund allocations (80 percent)	50,000	80,000
Additional unallocated savings	<u>+ 37,500</u>	<u>+ 0</u>
Net cash flow to cooperative	87,500	80,000
<i>Patrons</i>		
Qualified patronage refund allocations . .	62,500	100,000
Income tax before investment tax credit (at 30 percent)	18,750	30,000
Investment tax credit	<u>-0</u>	<u>-6,000</u>
Income tax paid by patrons	18,750	24,000
Cash patronage refunds (20 percent) . .	12,500	20,000
Income tax paid by patrons	<u>-18,750</u>	<u>-24,000</u>
Net cash flow to patrons	(6,250)	(4,000)
Total income tax paid by cooperative and patrons	18,750	24,000

¹ Tax rates used are for tax years beginning in 1983 and afterwards. See Table 6-1.

Under Plan I of table 6-7, the cooperative adds \$6,000 in investment credit to unallocated savings. The taxes on \$37,500 of taxable income are \$6,000, so the cooperative retains \$37,500 of its \$100,000 net savings as unallocated reserves and allocates the balance as qualified patronage refunds. The cooperative pays no income tax, and the noncash portion of the patronage refund allocations is \$50,000. Thus the cash flow of the cooperative is \$87,500.

The cooperative's patrons receive \$62,500 in qualified patronage refund allocations on which they pay \$18,750 in income taxes. Because they receive only \$12,500 in cash, they face a negative cash flow of \$6,250.

Under Plan II, investment tax credit is not used to increase unallocated savings but is passed through to patrons. The entire \$100,000 net savings is allocated as qualified patronage refunds. The cooperative has no taxable income, and its cash flow is \$80,000, the noncash portion of the refund allocations.

Patrons incur an initial income tax liability of \$30,000 from the allocations, but pay only \$24,000 in income tax because of the investment tax credit pass-through. However, because the patrons receive only \$20,000 of the patronage refund allocations in cash, they face a negative cash flow of \$4,000.

Patrons pay \$5,250 more taxes than under Plan I. This increase occurs because under Plan I, the unallocated savings are taxed at the corporate tax rates, which are lower than the patrons' tax rates. If the cooperative had significantly higher net savings or the patrons incurred significantly lower taxes, the differences in taxes would be less, and might result in greater tax savings under Plan I.

There are disadvantages to Plan I. Patrons receive \$36,500 less in patronage refund allocations and \$5,250 less cash flow. A cooperative should consider the impact on its patrons in deciding whether to use investment tax credit in this manner.

Equity Redemption Laws for the Layperson

The Federal tax laws discussed in the previous section permit agricultural cooperatives to issue patronage refunds partly as an equity interest rather than wholly in cash. The favorable cash flow created by using deferred patronage refunds makes this an attractive method of distributing net margins for cooperatives. Once a cooperative issues patronage refunds as equity interest, however, Federal tax law no longer governs the relationship of the cooperative and its members to the deferred patronage refund.

Instead, one must consult cooperative incorporation statutes. Nearly all cooperative associations are incorporated, some under general or non-profit corporation laws, but most under general or agricultural cooperative laws. These incorporation laws govern the rights, duties, and obligations between a cooperative and its members concerning deferred patronage refunds.

Of the 86 general and agricultural cooperative incorporation statutes in the United States, none requires cooperatives to adopt a systematic redemption program. Three statutes do not even provide for equity redemption. Among the remaining statutes, treatment of equity redemption varies considerably from one State to the next. Because of this diversity,

a detailed analysis of equity redemption laws would be unwieldy. Only major features will be presented here.

The Discretionary Approach

Most statutes do not state rules for redemption. Rather, they say redemption procedures should be stated in the cooperative's articles of incorporation, bylaws, marketing agreements, or in the deferred patronage refund certificates. Since the cooperative, either through its directors or members, drafts these legal documents, this gives the cooperative discretion to tailor an equity redemption program to its needs.

Specific Cases—Most statutes adopting the discretionary approach refer to redemption only in specific cases such as death, expulsion, withdrawal, or forfeited membership. Statutes of this type follow the Standard Act, the act adopted by 39 States in the 1920's. Today, 29 States still closely follow the act's discretionary provision. The original law said each association may stipulate in its bylaws the manner of determining the "value" of a "member's interest" and its purchase by the association "upon the death or withdrawal of a member or stockholder, or upon the expulsion of a member or forfeiture of his membership."

This provision does not require that redemption procedures be included in the bylaws; it merely suggests that procedures may be included in the bylaws in specific cases. If a cooperative chooses to include redemption provisions in its bylaws, the cooperative may still exercise wide authority over redemption in specific cases.

This is so, because the statute uses key words without defining them further. For instance, "value" might denote par, book, discounted, or fair market value. "Property interests" might be defined to include all deferred patronage refunds, or merely membership certificates or stock, or both. With the right combination of narrow definitions, a cooperative could have a "specific case" redemption program with virtually no application.

Termination of Membership—The other major group of statutes adopting the discretionary approach are those of Alaska, North Dakota, Oregon, South Dakota, and Wisconsin. These States' laws say that the bylaws govern the terms and conditions of "termination of membership." While the statutes do not refer to equity redemption directly, one of the implied "terms and conditions" of membership termination would be the redemption treatment of a terminated member's equities. In these five States, the bylaws would, therefore, establish the proper treatment of a terminated member's equities.

Other Discretionary Approaches—The remaining statutes following the discretionary approach use varied language. Nine statutes say that redemption procedures may be contained in a cooperative's articles of incorporation, bylaws, marketing contracts, or in the certificates representing deferred patronage refunds.

Two groups of statutes do not refer to equity redemption directly, but merely mention how net margins ought to be handled. Four statutes say that the bylaws may provide the "manner of distributing profits." Eight statutes stipulate that distributions must be made in the form of "uniform dividends." With either group, a cooperative can decide how to treat deferred patronage refunds.

The Mandatory Approach

A few statutes require some redemption of deferred patronage refunds. No statute establishes a mandatory revolving cycle or retirement date for all equities. Rather, mandatory provisions operate only in specific cases, usually those involving withdrawal or expulsion. Most mandatory provisions follow the language of the Standard Act and usually are found in those States that also have the Standard Act's discretionary provision.

As adopted in 12 States and with only minor changes in 9 others, the Act's mandatory provision says: "in case of the withdrawal or expulsion of a member, the board of directors shall equitably and conclusively appraise his property interests in the association and shall fix the amount thereof in money which shall be paid to him within one year after such expulsion or withdrawal."

Despite this mandatory rule, the cooperative can decide how to comply. The appraised value of a member's "property interests" must be paid in cash within 1 year, yet the term "property interests" is not further refined. That term could be narrowly defined in the bylaws. For example, "property interests" might exclude all amounts evidenced by certificates of any kind or all amounts allocated to a member. This type of a definition is used in Article I, Section 2 of *Sample Legal Documents* of Agricultural Cooperative Service. Having adopted this definition, a cooperative retains control and possession of substantial amounts of a member's property which would otherwise be redeemed under the statute.

The mandatory provision also does not define "withdrawal" or "expulsion." The statute directs the board of directors to "appraise" the member's property interests without specifying any method. Presumably, the cooperative's bylaws or articles would define the terms "withdrawal," "expulsion," and "appraise."

Conclusion

Equity redemption provisions are of two types: discretionary and mandatory. Most State statutes have discretionary equity redemption rules, permitting the cooperative to develop its own equity redemption policy and to establish that policy in its articles of incorporation, bylaws, marketing contracts, and the certificates representing deferred patronage refunds.

Some statutes require a cooperative to redeem a member's equities, but only in cases of member withdrawal or expulsion. Even where a State statute contains a mandatory provision, cooperatives still may fit equity

redemption to their needs by narrowly defining key statutory terms. Those definitions are usually found in a cooperative's articles or bylaws.

With either a discretionary or mandatory equity redemption law, one never arrives at a final solution to an equity redemption problem by referring to the law itself. Instead, one must consult a cooperative's legal documents, articles, bylaws, marketing contracts, and stock or equity certificates, in conjunction with the equity redemption law, before reaching a legal conclusion to an equity redemption problem.

Equity Redemption Laws for the Lawyer

Most State statutes permit cooperatives to issue a variety of financial instruments to represent per-unit capital retains and deferred patronage dividends (referred to in this section as deferred patronage refunds). The redemption rights of producers holding such instruments and the corresponding redemption duties of an issuing cooperative are based on the relationships established by such instruments, the common law, cooperative incorporation statutes, a cooperative's bylaws, its articles of incorporation, and its marketing agreements.

Equity redemption rules vary considerably among jurisdictions. Some cooperative incorporation statutes leave the specific terms and conditions associated with equity redemption entirely up to the cooperative's bylaws.³⁵ Other statutes require redemption under special circumstances such as expulsion or withdrawal. They even specify the time and manner of payment.³⁶

No statute, however, addresses all the details associated with the equity redemption process or requires a cooperative to adopt a systematic redemption program. Therefore, all cooperative statutes give cooperative members or boards of directors discretion to tailor an equity redemption program to the particular needs of their cooperative. The legal issues regarding equity redemption involve the limitations placed on that discretion. Those limitations arise from a cooperative's incorporation statute, its articles, its bylaws, its marketing agreement, and the common law.³⁷

This section identifies legal limitations placed on a cooperative's equity redemption policy by the common law and by Federal and State statutes, emphasizing State cooperative incorporation statutes.

A group of farmers wishing to form a cooperative has several incorporation options. The farmers may incorporate under a State's general or nonprofit corporation law and adopt bylaws to operate as a cooperative business. Neither general nor nonprofit corporation laws are analyzed here.

The farmers may also incorporate under a general cooperative statute—authorizing medical, housing, consumer, and agricultural cooperatives—or under a cooperative statute designed strictly for agricultural producers. Both the general and agricultural cooperative statutes are analyzed

here—a total of 85 statutes.³⁸

Amendments to these 85 statutes made over the past decade are also identified. Statutory rules regarding a cooperative's obligation to return net margins to members are not addressed. A cooperative's obligation to distribute net margins is distinct from its obligation to redeem net margins once distributed but retained.³⁹

Common Law Rules Relating to Equity Redemption

At common law, a member of a nonstock association was not entitled to receive anything from the association upon resignation or expulsion.⁴⁰ Likewise, upon sale or transfer of stock, a member of a stock association at common law possessed no further interest in the association, except those independent of stock ownership.⁴¹

The common law rules do not, however, operate where a State statute contains an equity redemption provision. If, however, the incorporating State statute does not provide for redeeming members' equities, the common law rules could conceivably apply, if there is no statement in the equity instrument itself or contrary expression in the articles or bylaws. Three statutes have no provision for equity redemption.⁴²

Cooperative statutes containing equity redemption provisions say that the responsibility for establishing redemption policy rests either with members⁴³ or with the boards of directors.⁴⁴ When either the members or directors formulate equity redemption policy, the common law imposes constraints on decisions they can make.

Where members are directly responsible for adopting an equity redemption program, they may vote their own interests, because members are not subject to fiduciary obligations. A member may even ratify a transaction in which he or she has a personal interest, so long as he or she is not a controlling shareholder.⁴⁵ Few, if any, cooperative members would likely be controlling shareholders, because State statutes usually restrict stock ownership or voting or both. The majority's determination of a fair and equitable redemption policy may be overturned, however, when challenged by an aggrieved minority member, if the majority vote has countered the cooperative's interests and destroyed the minority member's interests.⁴⁶

Unlike the cooperative member, the cooperative director has fiduciary obligations to the cooperative and indirectly to its members.⁴⁷ Where the board of directors is responsible for establishing equity redemption policy, the directors must carefully balance the competing interests of those to whom the directors owe a fiduciary duty. For instance, the board must consider the cooperative's present financial position, its future capital needs, current members' cash requirements, former members' redemption expectations, and creditors' financing requirements.

Where the board has made a good faith judgment regarding equity re-

demption, with the degree of diligence, care, and skill that prudent persons would have exercised under the same circumstances, then the board's decision will generally be upheld by a court. This freedom to make decisions is part of the "business judgment" rule.⁴⁸

Common law may be modified by Federal or State law. The legislature in this instance would be acting as a "super board of directors," assuming the board's role of balancing competing interests. The next section identifies the effect such laws have on members' or directors' discretion in establishing equity redemption policy.

Federal Legislative Authority Over Equity Redemption

No Federal law requires redemption of retained equities. The Federal tax code does not establish mandatory equity redemption programs. It merely specifies conditions to be met when equity instruments are issued or redeemed so that the cooperative may deduct the value of the equity instrument. There have been recent proposals for Federal intervention in equity redemption.

In 1969, the House of Representatives passed an amendment to the Internal Revenue Code that would have required a cooperative to pay 50 percent of its patronage refund in cash, if the cooperative were to deduct the entire patronage refund. To avoid hardship, the new requirements would have been phased in over a 10-year period. Furthermore, the amendment would have required that the balance of such refund be payable within 15 years.⁴⁹

The Senate did not include such a provision in its version of the 1969 Tax Reform Act, and the final conference version of the act likewise did not contain any equity redemption legislation.⁵⁰ Suggesting that legislative intervention was premature, the Conference Committee stated that the topic of deferred patronage refunds merited further investigation by congressional staffs.

In 1979, the General Accounting Office (GAO) recommended that if cooperatives failed to adopt fair and equitable equity redemption programs voluntarily, the Department of Agriculture should develop a legislative proposal to deal with the equity redemption issue.⁵¹ GAO's concern stemmed from its finding that some cooperatives had no equity redemption program and that a few cooperatives had not redeemed equities issued 20 years earlier.

GAO thought that such a situation, when coupled with the fact that some equityholders were inactive cooperative members who no longer possessed voting rights, was inherently unfair and inequitable.⁵² If cooperatives did not take steps to assure that financing burdens were borne by current members, a legislative solution was appropriate. GAO's solution would consist of either or both of the following requirements: (a) a cooperative must pay interest or dividends on retained equities, and (b) a cooperative must redeem its retained equities within a certain time per-

State Statutes and Equity Redemption

General Observations—Of the 82 cooperative statutes that have equity redemption provisions,⁵⁴ none gives a definitive answer to the legal questions that might arise in an equity redemption program. To advise a cooperative or an equityholder on an equity redemption problem, an attorney consequently would have to consult the common law,⁵⁵ general corporate law,⁵⁶ contract law,⁵⁷ and the cooperative's articles, bylaws, marketing agreements, and incorporation statute.

State statutes generally reflect two basic approaches when addressing equity redemption. Some do not require redemption; instead, they grant cooperatives authority to set up their own redemption procedures, even in cases involving death, withdrawal, or expulsion of a member. For example, four statutes state that the bylaws may provide for the manner of distributing profits.⁵⁸ Eight statutes provide that distributions shall be in the form of "uniform dividends."⁵⁹ Presumably, the articles of incorporation or bylaws would define further the terms and conditions of those "uniform dividends." Although the statutory language varies slightly, nine other statutes permit a cooperative to establish in its articles, bylaws, or marketing agreements the rights, duties, and obligations of the cooperative and its members concerning retained funds.⁶⁰

Statutes adopting the second approach require redemption in special cases such as death, withdrawal, or expulsion of a member. However, these statutes differ in how to achieve such redemption. Some leave the specifics of special case redemption to the bylaws;⁶¹ others contain extensive special case redemption procedures, thereby eliminating most of the cooperative's discretion.⁶² Even those statutes having extensive mandatory provisions grant the cooperative discretion to handle its redemption obligations with terms or phrases that may be defined in a cooperative's articles or bylaws. For instance, where statutes require that members receive their property interests in the association within 1 year after withdrawal, such statutes usually do not further define property interests, even though the term is broad enough to encompass membership or stock certificates, capital advances, trade accounts, retained equities, loans, etc.⁶³

As a result, there is some latitude, despite mandatory provisions, to describe what property interests come due upon a member's withdrawal or expulsion. One common bylaw provision defines property interests narrowly, excluding amounts allocated to members or amounts represented by certificates of any kind from the property interests to be redeemed on termination of membership.⁶⁴

Before such amounts could be excluded from the definition of property interests, the cooperative must allocate them properly to members or issue certificates representing such amounts. In *Southeastern Colorado Cooperative v. Ebright*,⁶⁵ an action for goods sold, the cooperative had a

bylaw provision on allocations and certificates similar to the one found in *Legal Phases of Farmer Cooperatives*.⁶⁶ Nonetheless, the defendants were entitled to set off accrued, but unpaid patronage refunds, because the board had failed either to allocate patronage refunds properly or to issue certificates for such refunds.

When a cooperative's legal documents and incorporation statute identify what property interests are payable, additional questions may remain such as how to value members' property interests. A cooperative could choose to pay the par value, fair market, or discounted value of a member's property interests. Such alternatives would probably be reasonable where the governing language of the statute refers only to "value," without specifying a valuation method.⁶⁷

Analytical Framework—Legal analysis of an equity redemption problem requires more than simply examining an equity redemption provision in a State statute. Solutions to redemption problems must come through careful process involving a cooperative's articles and bylaws.

First, the analyst must determine what type of financial instrument—common stock, preferred stock, or equity certificate—is involved in the equity redemption law. Many States have several redemption provisions, each designed for one type of financial instrument. These provisions usually afford different redemption treatment for different financial instruments.

Statutory redemption provisions relating to common stock often contain restrictions to ensure that producers control the cooperative. Restrictions commonly state that the board must approve the proposed transfer of common stock or that the cooperative has the first option to purchase its common stock when a holder desires to terminate membership. Few States impose these same restrictions on equity certificates.

With regard to preferred stock, State statutes generally grant the cooperative wide discretion in establishing the terms and conditions of its issuance, retirement, and dividend payment. Preferred stock of agricultural cooperatives consequently does not differ greatly from comparable securities of ordinary business corporations.⁶⁸ Because the legal treatment of these various financial instruments is not uniform, the legal treatment of otherwise identical equity interests will vary depending on the instrument involved.

The second step is to determine the type of financial instrument involved. Most deferred patronage refunds will be in the form of equity certificates. In 1976, 59 percent of allocated equity capital was in the form of equity certificates. Other types of allocated equity capital and their percentages to total allocated equity capital were, respectively, common stock (19.2), preferred stock (21.3), and nonstock membership fee (0.5).⁶⁹

Third, it must be determined if the cooperative incorporation statute ap-

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plies to that particular equity instrument. Where the statutory term refers to preferred stock or equity certificates, this step presents no difficulty. Where the statutory term refers to property interests or evidences of equity, then the scope of those terms must be defined.

Fourth, the key statutory terms that determine how the rule is to be applied must be identified. Statutes often refer to “withdrawal of a member,” “payment,” or “value” without defining those terms further.

Finally, the redemption provision can be applied, using the bylaws or articles to define key statutory terms.

The Standard Act’s Discretionary and Mandatory Provisions—From 1921 to 1928, 39 State legislatures adopted the Standard Cooperative Marketing Act, an agricultural cooperative incorporation statute developed by California attorney Aaron Sapiro.⁷⁰ Because the Standard Act remains the principal agricultural cooperative incorporation statute, agricultural cooperative laws have been fairly uniform since the 1920’s.

However, States have deviated from the Standard Act’s language in two major areas—allocation of net margins and equity redemption. As a result, State equity redemption laws are more diverse than cooperative law generally. Despite this diversity, the Standard Act represents the majority rule and serves as a useful starting point for analysis.

The Standard Act contains two equity redemption provisions and both are found in the bylaws section of State statutes. The first provision relates to procedures for adopting a general, nonmandatory redemption program, and it should be read in conjunction with the permissive language concerning bylaw adoption.

“Each association, under its bylaws, may also provide for any or all of the following matters: ...the manner of determining the value of a member’s interest and provision for its purchase by the association upon the death or withdrawal of a member or stockholder, or upon the expulsion of a member or forfeiture of his membership, or at the option of the association, the purchase at a price fixed by conclusive appraisal by the board of directors.”

Twenty-nine statutes contain nonmandatory redemption provisions similar to that of the Standard Act.⁷¹ The use of the word “may” in the bylaws phrase indicates that adopting general equity redemption procedures is wholly discretionary. The statute only suggests, but does not require, certain redemption features.⁷² The statute does not specify what property constitutes a “member’s interest”; that remains to be defined by the bylaws. Likewise, the bylaws must identify a valuation method, because the statute refers merely to the “manner of determining the value of a member’s interest.” Valuation procedures in the bylaws should also indicate who should perform the valuation, although the original statute indicated that the board of directors might appraise the member’s interest. This reference to the board of directors’ appraisal seems unnecessary, be-

cause this would be an alternative included in the language "manner of determining the value of a member's interest." Recognizing this fact, several States with nonmandatory redemption provisions identical to the Standard Act deleted the phrase "at the option of the association, the purchase at a price by conclusive appraisal by the board of directors."⁷³ Two States retained the original phrase, but substituted "board of *appraisers*" for "board of *directors*," requiring that the board of appraisers not be dominated by representatives of the cooperative."⁷⁴

The crucial feature of the Standard Act's nonmandatory redemption provision is the association's repurchase option. Although repurchase options were originally considered unreasonable and arbitrary restraints on alienability,⁷⁵ they are commonly sustained where the repurchase option provision is determined to be a reasonable restraint for the commercial setting for which it was designed.⁷⁶ At least with regard to members' voting stock, an association's repurchase option would likely be found a reasonable method to assure that the association remained "organized and controlled by, and for, producers."⁷⁷ The Standard Act's *nonmandatory* provision states that the repurchase option may be exercised when one of four events occurs: Death, withdrawal, expulsion of a member, or forfeiture of membership. However, the Standard Act's *mandatory* redemption provision requires repurchase when a member withdraws or is expelled. If a statute has both the mandatory and nonmandatory redemption provisions, then only the mandatory provision would apply in cases of expulsion or withdrawal.

Recognizing this confusion between mandatory and nonmandatory provisions, Kansas limited its nonmandatory provision to death or forfeiture.⁷⁸ One of the California statutes, otherwise identical to the Standard Act's nonmandatory redemption provision, added member disqualification as an event triggering the association's repurchase option.⁷⁹

If one of these events permitting repurchase occurs and if the board of directors is responsible for valuing a member's interest, the board's appraisal must reflect a good faith judgment. The Standard Act purports to eliminate any possible judicial review of the board's valuation; it states that the board's appraisal is conclusive. However, as Professor Hanna observed:

"Taken literally, such a provision [calling for 'conclusive appraisal'] would seem to be invalid. If an association were to interpret the provision as one by which it could buy out the interest of any member at any time for a nominal sum and compel the member to accept the directors' decree as to the value of his interest, the association would be assuming a degree of arbitrary power unusual, to say the least, in the business world. Moreover, since after the purchase of a member's interest he is no longer a member, and in many States the association can no longer handle his products, the provision would afford the association an exceptional way of getting out of the obligations of any marketing contract which seems burdensome. It seems likely that the provision will be interpreted as contemplating a genuine valuation as opposed to an ar-

bitrary fixing of compensation and that the word 'conclusive' will be understood to mean presumed accurate in the absence of evidence to the contrary. Several States have sought to avoid the difficulty by eliminating the word conclusive from this section."⁸⁰

While the Standard Act's nonmandatory redemption provision raises a variety of legal issues, such as what constitutes a member's interest or what is meant by value, few States amended that provision to elaborate further on some of its key terms. The Standard Act's mandatory provision likewise raises many legal issues by using terms subject to diverse interpretation. However, unlike the nonmandatory provision, many States have amended the mandatory provision. Eight statutes that adopted the Standard Act's nonmandatory provision either eliminated the mandatory provision entirely or substituted another in its place.⁸¹ Only one State, Nebraska, adopted the mandatory provision without also adopting the nonmandatory provision.

The mandatory provision requires the board of directors to pay a withdrawn or expelled member the appraised value of his property interests in cash within 1 year after withdrawal or expulsion. The precise language used in many States is as follows: "in case of the withdrawal or expulsion of a member, the board of directors shall equitably and conclusively appraise his property interests in the association and shall fix the amount thereof in money which shall be paid to him within 1 year after such expulsion or withdrawal." Eleven statutes adopted this provision without amendments.⁸² Ten statutes adopted the Standard Act's mandatory provision with amendments.⁸³

In contrast to the Standard Act's nonmandatory provision, which uses the word "may," this provision uses the word "shall" throughout, rendering it unmistakably mandatory.⁸⁴ A cooperative incorporated under a statute with a mandatory provision could experience serious cash flow problems, if it had many expulsions or withdrawals within a short period. To reduce the financial strain the Standard Act's mandatory redemption provision imposes on cooperatives, many States have amended their mandatory redemption law.

Under the original Standard Act, the bylaws, the articles, or the members could not alter a cooperative's redemption obligation. Three statutes containing the Standard Act's mandatory provision now permit the cooperative to "override" the statute. Kentucky amended one of its laws, so that redemption would not be mandatory if an association's bylaws so provided.⁸⁵ In that instance, the bylaws, not the statute, control. Illinois changed one of its laws, so that the articles could limit the board's power to appraise and pay the value of a member's interest.⁸⁶ Missouri states that the board of directors may appraise and pay for a member's interest only when authorized by the members.⁸⁷ California eliminated the mandatory redemption requirement for cases of withdrawal⁸⁸ and indicated that the bylaws could impose a procedure or penalty for expulsion.⁸⁹ Four statutes⁹⁰ added death of a member to expulsion and withdrawal as one of the events that triggers mandatory redemption.

Consequently, Missouri, Nebraska, North Carolina, and South Carolina now permit redemption payments to be made to a member's legal representative, assignee, or estate.⁹¹

The Standard Act says that a withdrawn or expelled member is to receive his or her property interest in the association, without defining what property interests are intended. Yet the term property interests may include many types. For instance, a member may have a current account with a cooperative for goods delivered to, or purchased from, the association. Every member will also have either a stock or membership certificate reflecting his or her status as a member.

Finally, the member might have substantial property interests from deferred patronage refunds. These may be evidenced in various forms: "credits, stock, certificates of interest, revolving fund certificates, letters of advice, or other certificates or securities of the cooperative or of other associations or corporations, in other property or in any combination thereof."⁹² Presumably, all these property interests would be due in cash within 1 year following expulsion or withdrawal. However, a cooperative could adopt a bylaw provision narrowly defining property interests.⁹³

Three States have replaced the term property interest. Illinois now uses the term "membership and/or common stock interests."⁹⁴ Nebraska refers to "member's membership."⁹⁵ North Carolina and South Carolina use the most detailed language in identifying the property interests that must be redeemed within 1 year: Only those amounts due to the member for raw products delivered to the association are payable within 1 year.

All other amounts, such as equity credits, are payable as specified by the articles and bylaws.⁹⁶ The Standard Act also requires that payments for equities redeemed under the mandatory provision be made in cash. To alleviate the drain on a cooperative's cash flow in complying with that payment provision, two States that otherwise follow the Standard Act permit payment in forms other than in cash. For instance, Idaho permits payment in cash, preferred stock, or any other obligation permitted in the bylaws.⁹⁷ Mississippi allows payment in the form of a debt instrument.⁹⁸ The Standard Act's requirement that a cash redemption payment be made within 1 year also aggravates a cooperative's cash flow problem. Therefore, several States allow redemption payments to be made over another time frame. An indefinite payment period is implied in Idaho and Mississippi statutes.⁹⁹ In Kentucky, both the form and timing of the redemption payment are to be determined by the board of directors.¹⁰⁰ Missouri states that payment for redeemed equity is due at such time as the board of directors shall authorize, but "in no event later than [the] same would have been payable in the usual course of business, had such member continued his membership."¹⁰¹ Likewise, Louisiana allows the board of directors to establish the time for payment, but requires that payment occur before "the termination of the current marketing or other agreements."¹⁰² Nebraska allows payment within a "reasonable time" after the board of directors ascertains the

value of a member's membership.¹⁰³

The Standard Act's mandatory provision states that the board of directors' appraisal is conclusive.¹⁰⁴ This language purportedly bars any judicial review of the appraisal. However, the provision also demands that the appraisal be equitable. To assure that the board's appraisal is indeed equitable, a court must have review power. Hence, the board's appraisal truly is not conclusive, but rather the statute raises a presumption in the board's favor.

The General Cooperative Statute—Three jurisdictions, the District of Columbia, New Mexico, and Texas, have the most detailed equity redemption laws in the country.¹⁰⁵ These statutes are general cooperative statutes, permitting incorporation of all cooperative enterprises, agricultural, consumer, or otherwise, and they authorize associations to issue net savings partly in cash and partly in "shares."¹⁰⁶

Such shares, unlike most equity capital, have a fixed future retirement date based on order of issuance.¹⁰⁷ Under these laws, the bylaws provide for the disposal of a member's interest on cessation of membership.¹⁰⁸ However, the statute, not the bylaws, controls in cases involving recall, inactive status, withdrawal, expulsion, or attachment. Other statutes do not contain as many of these special provisions.

When a member has failed to patronize the association for a specified time, he or she is declared inactive, and a recall provision applies. The recall provision authorizes the directors to use surplus funds¹⁰⁹ or reserve funds¹¹⁰ to recall at par value a member's holdings¹¹¹ or membership certificates.¹¹² In addition, an inactive member loses his or her membership status.¹¹³ Where member withdrawal is concerned, the District of Columbia, New Mexico I, and Texas I statutes establish detailed procedures for transferring a member's interest. First, the law says that the directors may repurchase a member's holdings at par value. However, members, by majority vote, may compel the directors to exercise their repurchase power.¹¹⁴ If the association fails to repurchase the withdrawing member's holdings within 60 days, then the member may dispose of his or her interest elsewhere.

However, the directors must approve the proposed transferee. If rejected, the proposed transferee may appeal the directors' action at a members' meeting. If the members likewise do not approve the proposed transferee, then the directors must repurchase the withdrawing members' interest when the association's solvency is not jeopardized thereby¹¹⁵ or "if and when there are sufficient surplus funds."¹¹⁶

The Texas statute requires the cooperative to repurchase investment certificates at par value within 90 days of the withdrawal notice. Although lacking provisions comparable to those of the District of Columbia and New Mexico relating to proposed transferee approval, Texas does require the investor to sell, assign, or convey his investment certificates in accordance with the association's bylaws.¹¹⁷

Repurchase of a member's holdings at par value is also necessary when members are expelled, unless repurchase jeopardizes the solvency of the association¹¹⁸ or if there are not "sufficient reserve funds."¹¹⁹

Repurchase at par value is also one of two alternatives for the association, if a member's holdings in excess of those necessary for membership are subjected to attachment, execution, or garnishment for a member's debt. In such cases, the District of Columbia and Texas require repurchase regardless of the association's financial condition. In those jurisdictions, repurchase might have to be made when the association does not have sufficient surplus funds.¹²⁰ The association's other alternative for attachment, execution, and garnishment is to admit the purchaser to membership.¹²¹

The Pacific-North Central Statute—The redemption laws of three North Central States—North Dakota, South Dakota, and Wisconsin—are virtually identical to the equity redemption laws of two Pacific region States—Alaska and Oregon. Together, they constitute one of, if not the most, prominent statutory patterns other than the Standard Act.

The starting point in analyzing the Pacific-North Central statutes is the provision authorizing the board of directors to distribute annual net margins in various ways. Payment may be in the form of "cash, credits, capital stock, certificates of interest, revolving fund certificates, letters of advice, or other certificates or securities of the cooperative or of other associations or corporations, in other property, or in any combination thereof."¹²²

If the cooperative issues common stock for the noncash portion of net savings, then the redemption provisions applicable to common stock apply. Under the Pacific-North Central statutes, a cooperative is authorized to acquire, recall, exchange, redeem, and reissue its own stock, unless the articles provide otherwise.¹²³ Also, both the Pacific and North Central laws say that when stock is recalled, the cooperative shall pay its par value and accrued, but unpaid dividends.¹²⁴

If the book value of the stock is less than par value, then the North Central statutes say that a cooperative will pay book value.¹²⁵ The Pacific statutes require the cooperative to pay the consideration for which the shares were issued if the shares have no par value.¹²⁶ Both sets of statutes eliminate the acquisition, recall, exchange, or redemption option, if after such action, the cooperative is in a negative net worth position.¹²⁷

The North Central statutes do not specify treatment of a member's interest if a member's holdings are in a form other than stock. Where redemption is coupled with a termination of membership, presumably the bylaws would control.¹²⁸ For instances other than termination, presumably the terms and conditions on the certificates would control redemption.

The Pacific statutes, on the other hand, provide equal treatment for equity interests represented either by stock or by other forms. "Unless the articles provide otherwise, a cooperative may recall membership stock upon termination of membership, acquire, exchange, redeem, and reissue its own shares *or other evidences of equity*."¹²⁹

Other Statutory Patterns—Only three other sets of statutes have any equity redemption features in common. The first set of statutes is that of two Gulf States—Alabama and Mississippi.¹³⁰ These statutes apply only in four special cases: Death, dissolution, ineligibility of a member, and wrongful transfer of the association's shares. Even in these cases, the statutes do not apply, if the member promptly transfers his or her shares to a person eligible for membership. If, however, the shares are not so transferred, then the association "shall take up" the shares at par or appraised value. Where the board appraises the value of members' shares, the board of directors' appraisal is "conclusive."¹³¹ Payment for such shares may be in cash or in certificates of indebtedness payable from the association's income.¹³² Maine and Hawaii also have identical provisions concerning redemption, and their statutes specify redemption procedures according to the type of financial instrument involved. For example, the statutes indicate that the bylaws may set rules relating to issuance, retirement, and transfer of stock.¹³³ For interests represented by preferred stock, the terms and conditions in the articles or on the stock certificates themselves govern redemption or retirement.¹³⁴ The most detailed redemption provision involves a member's "membership interest." If a member decides to withdraw from the association or if the association terminates the membership, then the member will receive the value of his or her membership interest in money, as appraised by the board of directors, at a time specified in the bylaws. On the other hand, if the member wishes to transfer his or her interest to another member and the board approves the transferee, then the board is relieved of its redemption obligation.¹³⁵

The last statutes having equity redemption provisions in common are those of Oklahoma and New Mexico. Both contain nonmandatory equity redemption provisions similar to those of the Standard Act.¹³⁶ However, they also contain identical redemption provisions for instances of member ineligibility. If a member is no longer eligible for cooperative membership, then the member shall lose his or her voting rights and cooperative membership, but nonetheless remain liable for obligations already incurred as a member. In addition, the ineligible member must receive, within 3 years after losing membership, the value of the membership interest as conclusively appraised by the board of directors. If, on the other hand, the association approves of the ineligible member's proposed transferee, then the association is under no obligation to pay the member the value of his or her interest.¹³⁷

Miscellaneous Equity Redemption Laws—Unlike the equity redemption laws previously examined, the remaining statutes are either unique or have some but not all provisions in common with other laws. The equity redemption laws of Pennsylvania, Utah, and Virginia contain three or

more provisions relating to equity redemption but have only one provision in common.

The common provision states that the "association may from time to time issue to each member a certificate of interest evidencing his interest in any fund, capital investment, or other assets of the association. Such certificate may be transferred only to the association, or to such other purchaser as may be approved by the board of directors, upon such terms and conditions as shall be provided for in the bylaws."¹³⁸ In other respects, the redemption laws differ, addressing redemption issues peculiar to the financial scheme contemplated under each statute

For instance, the Virginia redemption provisions are designed around the various property interests held by a member—membership interests, non-voting stock, equity certificates, and joint tenancies.¹³⁹

In Pennsylvania, equity redemption provisions are designed according to whether the cooperative is a stock,¹⁴⁰ or a nonstock cooperative corporation,¹⁴¹ with some provisions applying to both.¹⁴²

Other statutes have no provisions in common with other laws and are therefore unique. Some equity redemption provisions are quite extensive,¹⁴³ while others briefly treat the topic.¹⁴⁴ Unique statutes not previously analyzed are summarized in a footnote.¹⁴⁵

Recent Amendments to Equity Redemption Laws

By 1928, 39 States had adopted the Standard Act, complete with its mandatory and nonmandatory redemption provisions.¹⁴⁶ Few, however, have retained the Act's original language governing redemption.¹⁴⁷ Thus, equity redemption law was more uniform in 1928 than it is today, more than 50 years later.

Over the past decade, five State legislatures have amended their equity redemption laws. Redemption rules in four of them, Indiana, Nebraska, North Carolina, and South Carolina, were similar to the Standard Act. While the financial impact of these amendments awaits further analysis, these developments definitely signal a new statutory treatment of equity redemption. In reviewing these statutory developments, two separate concepts should be kept in mind: whether the amendment grants more or less discretion to the cooperative in adopting equity redemption programs and whether the amendment restricts or expands the types of property interest that must be paid in cases of mandatory equity retirement.

Before 1971, Indiana had both the mandatory and nonmandatory redemption provisions of the Standard Act.¹⁴⁸ In 1971, the Indiana General Assembly amended its statute to allow the board of directors to adopt bylaws that would determine the "time and manner in which a member's interest or shares may be redeemed by the association."¹⁴⁹ No longer is there a special, 1-year provision for redemption in cases of a member's expulsion or withdrawal. Thus, the Indiana amendment clearly

gave the board of directors greater discretion in equity redemption decisionmaking.

In granting the board of directors more freedom in developing an equity redemption program, Nebraska's 1977 amendment maintained the liberalizing trend set by Indiana. It eliminated, as did Indiana, the Standard Act's requirement that the board of directors pay the value of a member's interest within 1 year after withdrawal or expulsion.

Instead, the new law requires that the board account to the member for only his or her "membership" within a reasonable time after his death, withdrawal, or expulsion.¹⁵⁰

This new terminology, "membership," appears to be more limited than property interests. Under the new law, the board of directors must return to the member merely that capital attributable to his or her membership status such as stock or certificates. A member's other property interests, such as retained equities, apparently would not be paid until such time as the board of directors saw fit.

In 1979, North Carolina amended its equity redemption laws, retaining the Standard Act's nonmandatory provision, but changing the mandatory provision. A cooperative now must pay the member within 1 year those "amounts due him for any and all raw products which have been delivered by him to the association." This redemption obligation does not include "capital stock, certificates of interest, reserves or . . . equity credits"; instead, these equity interests are payable according to the association's bylaws or articles of incorporation.¹⁵¹

Because the amendment treats redemption for equity interests different from that for "amounts due him for any and all raw products," the latter term implies exclusion of equity interests and probably refers to an account payable. This new mandatory provision gives the board of directors greater latitude in redeeming retained equities when death, withdrawal, or expulsion occurs. In such cases, under the former law, a cooperative might have been obligated to redeem a member's equity interests and accounts payable within 1 year.

The neighboring State of South Carolina amended its mandatory equity redemption law in 1981.¹⁵² The new law is patterned after the North Carolina amendment.

Iowa amended its equity redemption law in 1979. It formerly limited the amount of current dividends payable in cash to 20 percent if there were any unpaid deferred patronage dividends from prior years.¹⁵³ The new law imposes the same 20-percent cash limitation on current dividends only for deceased members.¹⁵⁴

Before 1979, Iowa left the treatment of all deferred patronage refunds to the board of directors' discretion.¹⁵⁵ The new law not only makes the redemption of deferred patronage refunds mandatory for deceased natu-

ral persons and those ineligible for membership but also requires redemption of preferred stock held by deceased members.¹⁵⁶

The redemption requirement for preferred stock was necessary, because some cooperatives issue preferred stock for retained equities—a practice that developed as a result of the rule that prohibited payment of more than 20 percent of current patronage refunds in cash when there were unpaid patronage refunds from prior years. If a cooperative issued preferred stock rather than unpaid deferred patronage refunds, it could pay more than 20 percent of current patronage refunds in cash.

A sixth State, Colorado, repealed its old law in 1973 and enacted a substantially different cooperative law.¹⁵⁷ Because this new law is so different from the old law, it was not considered an amendment, but a new law. This new law permits, but does not require, the association to set forth in its bylaws the “method of determin[ing the] property rights and interests and time by which it [those rights and interests] shall be paid or delivered to such member or his representative upon withdrawal, expulsion, or death.”¹⁵⁸ Cooperatives incorporated under another Colorado cooperative statute¹⁵⁹ also are governed by this statutory provision. Two of the three Colorado cooperative statutes do not require redemption. Furthermore, the law allows the association to adopt its own procedures for dealing with the rights and interests of withdrawn, expelled, or deceased members.

Conclusion

No State statute requires a cooperative to adopt a systematic program to redeem deferred patronage dividends. In fact, most statutes leave redemption decisions to the board of directors’ judgment. Where statutes do require redemption, it is limited to special cases—withdrawal or expulsion of a member. Even where mandatory provisions exist, State statutes are not uniform in their treatment of members’ ownership interests. Recent amendments to State statutes are giving cooperatives more discretion in determining how to redeem equities.

Responsibilities of the Board

The legal responsibility for managing a cooperative rests with its board of directors. The board, which is elected by member-patrons, selects the officers, who have the duty to carry out the policies, plans, and programs adopted by the directors. One of the most important duties of the board is ensuring an adequate supply of capital to meet the cooperative’s needs. In most cooperatives, this means administering an equity redemption plan.

The board of directors has broad authority to carry out its duties as it sees fit, in the sound exercise of its business judgment. Under most circumstances, the board’s decisions will not be changed or invalidated in court.

However, the board is ultimately answerable to member-patrons, who own the equities that are held by the cooperative. Under some circumstances, the members have a legally enforceable right to have their equities redeemed.

This section explores the circumstances in which a cooperative may be compelled to adopt or follow an equity redemption plan or redeem certain equities in the absence of a plan. Although the topic of personal liability of officers and directors is beyond the scope of this discussion, the principles in such cases are similar to the ones discussed here.

Most cooperatives are incorporated under, and subject to, a State cooperative statute. They are also subject to general business corporation law, both statutory and common law. However, if the cooperative statute or cooperative principles conflict with corporation law, the rules specific to cooperatives generally will be applied.

Both corporate and cooperative law vest the organization's managerial power in a board of directors. The board, acting as a group, exercises its power through the officers. Within limits, the officers and directors have the right to manage their organization free from interference that can hamper their effectiveness. As long as they do not exceed those limits, their decisions will withstand any legal challenge. A court will not substitute its judgment for that of the directors or officers, who are presumed to have the expertise and judgment to manage the association.

Both officers and directors owe duties and obligations to the association, and ultimately to its owners. These obligations are easy to label. Directors owe a duty of loyalty and a duty of care. In short, they are obligated to act in the best interests of the organization on behalf of the owners. Although the duties are easy to state, they are difficult to apply in specific contexts. In the case of cooperatives, the difficulty is multiplied by the dual role of members as both patrons and owners of the cooperative, the differences between corporate norms and cooperative principles, the relative infrequency of litigation involving cooperative officers and directors, and the special role of patronage capital in cooperative finance.

Both the authority to manage the cooperative and the duties imposed on officers and directors are summarized in the business judgment rule, which states that the business decisions of directors and officers will not be reviewed by a court in the absence of fraud, overreaching, or abuse of discretion. In the event a court finds these factors, the directors may be held personally liable for monetary damages (and in extreme cases, criminally liable) or subject to a court order requiring or prohibiting certain actions.

In the case of equity redemption, patrons should be concerned with two major questions: Under what circumstances can they legally compel their cooperative to adopt or follow an equity redemption program? And conversely, under what circumstances can patrons prevent their cooperative

from redeeming equities?

General Principles

Patronage equities generally are not regarded as debts the cooperative owes the patron.¹⁶⁰ In *Clarke County Cooperative (AAL) v. Read*¹⁵¹ the patron sought to use outstanding equities that the cooperative had issued to him for the years 1953 to 1958 to offset his debt to the cooperative. The court rejected the attempt, stating the rule that the defendant could claim offset only when he could independently sustain an action for his debt as the plaintiff. The court observed that "equity credits allocated to a patron...do not reflect an indebtedness, which is presently due and payable...."¹⁶²

In *In re Cosner*,¹⁶³ the patron's trustee in bankruptcy sued the cooperative to recover the patron's equity. The cooperative asserted a security interest in the retained equities and attempted to assert an offset for accounts due from the patron. The court rejected the claim of offset, contrasting patronage refunds with "corporate cash dividends declared by an ordinary corporation under the general corporation law, which, upon declaration, become debts due and owing to the shareholders thereof."¹⁶⁴ The equity credits were nonetheless considered property in which the trustee had an interest under the bankruptcy act. The court ruled the trustee "entitled to have vested in him, with right to sell, interest that the bankrupt held in the capital reserve accounts, but that such sale is subject to the burdens of delay of payment and restrictions on transfer applicable to [patronage refunds]."¹⁶⁵

A different decision result in *Loomis Fruit Growers Assn. v. California Fruit Exchange*.¹⁶⁶ Per-unit retains had been withheld by the cooperative, and the board of directors had adopted a schedule providing for orderly redemption of the retains. The cooperative did not follow the schedule, and patrons brought a declaratory action to establish their right to the outstanding equities. The court held that the patrons were entitled to have their retains redeemed on the schedule adopted by the board of directors.

Because patrons can require their cooperative to obey the bylaws and board resolutions or give a valid reason for disobeying them, a cooperative might choose to remove an equity redemption obligation by amending the bylaws. This may not be successful. In *Lambert v. Fisherman's Dock Cooperative, Inc.*¹⁶⁷ a former member sued to recover the value of his membership shares.

The bylaws in effect at the time he purchased his shares stated that, upon termination of membership, a member would be entitled to receive the fair book value of his shares. Five years after the plaintiff joined the cooperative, that bylaw was amended to give a terminated member only the original purchase price for his shares. Both the bylaws and the certificate of association authorized amendments to the bylaws by majority vote of the members.

When the plaintiff's membership was terminated, the cooperative offered to pay him the book value of his shares. The trial court set the value of the shares under the original bylaws at more than \$15,000. The Appellate Division applied the new bylaws and reduced that amount to the plaintiff's cost, \$125. The State Supreme Court held that the bylaw amendment could not divest the plaintiff of his rights under the original bylaws and found that he was entitled to his share of the net asset value.

The court noted that the cooperative's right to amend its bylaws is not absolute. "[S]uch a right to amend may not be extended so as to impair or destroy a contract or vested right...in general the exercise of such a right should be confined to matters touching the administrative policies and affairs of the corporation, the relations of members and officers with the corporation and among themselves, and like matters of internal concern."¹⁶⁸

Obligations of the Board of Directors

Although cooperatives must follow explicit requirements in their bylaws and may not always remove those obligations by amending them, the board of directors frequently has very broad discretion to determine when particular bylaw provisions are invoked. For example, it is not an abuse of discretion for a cooperative to refuse to terminate a deceased member's membership.

This issue arose in *Evanenko v. Farmers Union Elevator*.¹⁶⁹ The bylaws stated that "the board of directors may terminate his membership" if a member died, ceased to be eligible for membership, failed to patronize the cooperative for 2 consecutive years, willfully disobeyed the bylaws, or obstructed the purposes and activities of the cooperative. The cooperative had to pay in cash, within 1 year after terminating the membership, the fair book value of the member's shares and "any patronage or other dividends accruing and unpaid."¹⁷⁰ The plaintiff, the estate of a deceased member, argued that the board of directors was obligated to terminate a membership when the member died; the word "may" in the bylaw had to be construed as "must" in the event of a member's death. Despite finding some superficial validity to the plaintiff's arguments, the court rejected that approach, noting that in ordinary circumstances a patron's interest in patronage refunds does not vest until the board of directors votes to pay the refunds in cash.

The court had difficulty "see[ing] why the death of a member would automatically cause his interest to vest. This would be in clear violation of the principle behind the law relating to cooperative associations, that the vesting of such interest should be the result of a positive declaration by the board of directors, acting in the exercise of its discretion determining when such interest should vest."¹⁷¹

Although the court refused to hold that the cooperative was legally required to terminate the memberships of all deceased members and liqui-

date their holdings within 1 year, the court nevertheless outlined conditions under which the board should terminate a membership. "It may be that the personal representative of a deceased member may be able to show that the financial condition of the cooperative is such that the denial of the payment by the board of directors within some reasonable time after the member's death would be an abuse of discretion. But that question is not before the court on this appeal..."¹⁷²

*Claassen v. Farmers Grain Cooperative*¹⁷³ reached a similar result. The bylaws specifically granted the board of directors discretion to redeem all the patronage equities and other financial interests held by the estate of a deceased member. The cooperative refused to retire the equities held by the Claassen estate, although it had retired other estates and was financially strong and able to pay.

The plaintiff argued that, under State law the cooperative was required to adopt a bylaw obligating it to repurchase a deceased member's interest, and that its bylaws had to treat all members alike. The court held that the State law authorized cooperatives to adopt such a bylaw, but it did not require them to do so. The second argument was also rejected, the court saying, "[I]f we agreed with plaintiff's contentions, we would be required to substitute our judgment for the judgment of the board of directors. This we are not inclined to do and conclude that we cannot become involved in the financial structure of this defendant to determine whether the board of directors acted reasonably under these circumstances."¹⁷⁴

Directors' Discretion

Two Arkansas cases illustrate the scope of directors' discretion. In the first case, *Driver v. Producers Cooperative, Inc.*,¹⁷⁵ plaintiffs were former members who had been issued preferred stock as a per-unit retain on cotton ginned by the cooperative. The cooperative had stopped issuing preferred stock in 1950; in 1954, it had stopped redeeming and paying dividends on the preferred stock. Instead, it distributed all its earnings to its current patrons. The plaintiffs sued to force the cooperative to comply with its charter and bylaws by paying dividends on the preferred stock and adopting an equity redemption plan.

The charter authorized the cooperative to issue preferred stock that would earn a dividend of 5 percent "if earned and when declared by the board of directors; and such dividends shall have preference over any and all other dividends or distributions declared in any year."¹⁷⁶

The bylaws provided the order in which the earnings of the cooperative were to be distributed. At least 10 percent of the earnings were to be added to a general reserve, until the reserve equalled at least 25 percent of all outstanding equities. Next, a dividend of at least 5 percent on preferred stock had to be set aside, although it could be paid in additional shares of preferred stock instead of cash. Finally, any earnings remaining would be paid to current patrons. The bylaws also provided that the

preferred stock would be revolved on a first-in-first-out basis, once the cooperative had adequate capital.

The trial court found no abuse of discretion by the board of directors and dismissed the suit. The Arkansas Supreme Court disagreed, saying “the co-op’s continued failure to establish a revolving fund deprives the [former patrons] of any assurance that their stock will be retired within the foreseeable future. Thus, the preferred stockholders’ investment is being used solely for the benefit of the active members, while stockholders are denied dividends as well as redemption rights.”¹⁷⁷

The court held that the former patrons were entitled to require the board of directors either to comply with the bylaws or establish a valid reason for noncompliance. The board argued that it had to pay large cash bonuses to current patrons to retain their business. This reasoning was rejected by the court.

The court held that, although the directors had proved that the policy was effective in keeping its customers, they had not shown that the policy was essential to prevent losing business. The court observed that the directors themselves accounted for 80 percent of the cooperative’s business and had received 80 percent of the cash bonuses. “[The] directors have acted without concealment and in the evident belief that their policy was a proper one. But it must be observed that the ginning business, which they are afraid of losing, is largely their own patronage.”¹⁷⁸

The second Arkansas case had similar facts. *Collie v. Little River Cooperative*¹⁷⁹ held that the board of directors had abused its discretion by failing to obey the articles of incorporation.

The articles gave the board discretion to pay a dividend of up to 6 percent on preferred stock and to redeem the stock on its call on a first-in-first-out basis. The bylaws required the cooperative to apply its earnings first to paying dividends of up to 6 percent on preferred stock; patronage refunds would be paid out of any remaining earnings. The bylaws further required the cooperative to maintain a reserve of at least 25 percent of its outstanding capital. The reserve was to be funded by retained patronage equities of at least 5 percent of patronage refunds.

The cooperative “earned more than enough to pay the maximum 6-percent dividend to the preferred stockholders (and to set aside the minimum 5 percent of profits for the allocated reserve), but rather than pay this amount, the board voted to pay to themselves and the other patrons of the gin a lion’s share of the savings.”¹⁸⁰ The court held that the “directors abused their discretion in failing to develop or maintain a rational balance between the amounts paid the preferred shareholders and the active members, and in failing to provide, maintain, and build the allocated reserve required by the articles of incorporation.”¹⁸¹

Lake Region Packing Association, Inc. v. Furze,¹⁸² provides a good discussion of the range of discretion available to a board of directors, and

to a court reviewing a board's actions.

Former patrons brought a class action lawsuit to compel the cooperative to adopt an equity redemption plan. The board of directors had decided to stop redeeming its allocated patronage reserve in 1958 because of anticipated adverse tax consequences.

The bylaws did not require redemption within a specific time, nor did they specify a proportion of earnings to be added to reserves each year. The board of directors could decide whether the cooperative's reserves were excessive. Any excess reserves were to be used to redeem outstanding equities on a first-in-first-out basis.

The trial court found that the directors' decision not to redeem any equities allocated before 1962 was not an abuse of discretion. The District Court of Appeal agreed that the directors had acted within their discretion in those years.¹⁸³ However, it felt that the plaintiffs "may be compelled, perhaps annually, to seek redress in innumerable subsequent suits...."¹⁸⁴ To obviate this, it directed the parties to develop a compromise plan that would lead to eventual redemption.

The Florida Supreme Court affirmed the Court of Appeal on the issue of abuse of discretion, but reversed the court's decision to require the parties to develop a redemption plan.

The court stated that a court would review a cooperative's refusal to redeem outstanding equities if the refusal constituted an abuse of discretion or a breach of trust, or was based on fraud, inequity, or illegality. "However, in the absence of any such impropriety, the decisions to date indicate that repayment of rights do not vest until dissolution unless applicable bylaw provisions require earlier repayment."¹⁸⁵ The Supreme Court held that the Court of Appeal did not have authority to intervene in decisions that the board of directors had discretion to make in the exercise of its sound business judgment.

Although the cooperative was not required to implement a plan at this time, the court described the type of conduct that would entitle the plaintiffs to judicial relief in the future. "[Whenever the plaintiffs] can demonstrate that the directors of the association abuse their discretion or breach their trust by establishing charges to the producers at an inordinately low rate in relationship to the competitive market, by permitting the accumulation of excessive reserves, or by any other conduct, [plaintiffs] have recourse to the courts...."¹⁸⁶

FOOTNOTES

¹ See *Legal Phases of Farmer Cooperatives* 358-67 (1976 ed.).

² *Farmers Cooperative Co. v. Birmingham*, 86 F. Supp. 201 (D. Iowa 1949) and cases cited therein at 212.

³ TD 2737, 20 TDIR 441 (1918).

⁴ Compare TD 2737, *supra* note 3, and OD 64, 1 CB 208 (1919) with IT 3208, 1938-2 CB 127, declared obsolete in Rev Rul 70-293.

⁵ *Farmers Cooperative Co. v. Birmingham*, *supra* note 2, 213.

⁶ Revenue Act of 1951, s 314, 65 Stat 452.

⁷ *Id.* See also W. Sutherland and M. Asbill, Patronage Refunds by Exempt Cooperatives under the Revenue Act of 1951, 30 Taxes 775 (1952). The quoted language was repealed by the Revenue Act of 1962, Pub. L. 87-834, s 17(b)(2).

⁸ See *Farmers Cooperative Co. v. Birmingham*, *supra* note 2, *Comm. v. B.A. Carpenter*, 219 F.2d 635 (5th Cir 1955); *Long Poultry Farms v. Comm*, 259 F.2d 726 (4th Cir 1956).

⁹ *Comm v. B.A. Carpenter*, *supra* note 8.

¹⁰ *Caswell's Estate v. Comm* 211 F.2d 693 (9th Cir. 1954).

¹¹ *Long Poultry Farms v. Comm*, *supra* note 8.

¹² Revenue Act of 1962, Pub. L. 87-834, s 17(a), Internal Revenue Code ss 1381-1388. Unless otherwise specified, all citations are to the Internal Revenue Code of 1954.

¹³ s 1382(b)(1).

¹⁴ s 1385 provides that patronage refunds paid in cash or qualified written notices, and amounts paid in redemption of nonqualified patronage refunds are included in gross income, except for amounts properly treated as an adjustment to basis of property, or amounts attributable to personal living or family items.

¹⁵ s 1382(b)(2).

¹⁶ s 1383.

¹⁷ s 1382(b).

¹⁸ s 1382(d).

¹⁹ s 1382(b)(2).

²⁰ s 1388(b).

²¹ s 1382(b)(1) and (2).

²² s 1388(c)(1).

²³ s 1388(c).

²⁴ s 1388(c)(1).

²⁵ ss 50A, 50B, 51.

²⁶ ss 44C, 46(a)(2)(C).

²⁷ ss 38, 46.

²⁸ s 46(a)(2). If the property also qualifies as energy property, an additional 10-percent credit is available. *Id.*

²⁹ s 46(c)(7).

³⁰ s 48(a)(1).

³¹ s 48(c).

³² s 46(a)(3).

³³ s 46(b).

³⁴ s 46(h).

³⁵ "Such bylaws *may* include: ...(1) [t]he method of determination of property rights and interests and time by which it shall be paid or delivered to such member or his representative upon withdrawal, expulsion, or death." Colo. Rev. Stat. s 7-55-103 (1973) (Colorado I) (emphasis added).

³⁶ "In case of the withdrawal or expulsion of a member, the board of directors *shall* equitably and conclusively appraise his property interests in the association and *shall* fix the amount thereof in money which *shall* be paid to him within 1 year after such expulsion or withdrawal." Ala. Code s 2-10-58 (1975) (Alabama II) (emphasis added).

This provision exists in many States because it was part of the Standard Act. See note 70 and accompanying text, *infra*.

³⁷ Because a cooperative possesses the power to alter its articles, bylaws, and marketing agreements, those legal documents usually do not limit a cooperative's equity redemption options. For that reason, they are not addressed in this section. However, the cooperative does not possess unfettered discretion to alter its legal documents. For instance, once a cooperative chooses an equity redemption program, a subsequent amendment to the bylaws may not be given effect if it violates a common law principle. See *Lambert v. Fisherman's Dock Coop. Inc.*, 61 N.J. 596, 297 A.2d 566 (1972) (holding that a bylaw amendment could not impair a member's vested right to receive the fair book value of his or her shares upon membership termination, although the power to amend was reserved in the bylaws).

³⁸ In instances where a jurisdiction has more than one cooperative statute, citation to a statute is followed by a parenthetical, for example (Florida II), indicating which statute of that jurisdiction is referenced. The following 85 State cooperative incorporation statutes are analyzed in this section:

Ala. Code

ss 2-10-20 to 2-10-35 (1975 & Supp. 1980)(Alabama I)

ss 2-10-50 to 2-10-74 (1975)(Alabama II)

ss 2-10-90 to 2-10-108 (1975)(Alabama III)

Alaska Stat.

ss 10.15.005 - 10.15.600 (1968)

Ariz. Rev. Stat. Ann.

ss 10-701 to 10-724 (1977 & Supp. 1980-81)

Ark. Stat. Ann.

ss 64-1501 to 64-1525 (1966 & Supp. 1980)(Arkansas I)

ss 77-901 to 77-928 (1957 & Supp. 1980)(Arkansas II)

ss 77-1001 to 77-1027 (1957 & Supp. 1980)(Arkansas III)

Calif. Food & Agric. Code

ss 54001-54294 (West 1968 & Supp. 1981)(California I)

Calif. Corp. Code

ss 12200-12956 (West 1977 & Supp. 1981)(California II)

Colo. Rev. Stat.

ss 7-55-101 to 7-55-121 (1973 & Supp. 1979)(Colorado I)

ss 7-56-101 to 7-56-133 (1973 & Supp. 1979)(Colorado II)

ss 7-57-101 to 7-57-106 (1973)(Colorado III)

Conn. Gen. Stat. Ann.

ss 33-183 to 33-193 (West 1958 & Supp. 1981)(Connecticut I)

ss 33-194 to 33-217 (West 1958 & Supp. 1981)(Connecticut I)

Del. Code Ann.

tit. 3 ss 8501-8562 (1974 & Supp. 1979)

D.C. Code

ss 29-801 to 29-847 (1973)

Fla. Stat. Ann.

ss 618.01-618.28 (West 1977 & Supp. 1980)(Florida I)

ss 619.01-619.09 (West 1977 & Supp. 1980)(Florida II)

Ga. Code Ann.

ss 65-201 to 65-231 (1979)

Hawaii Rev. Stat.

ss 421-1 to 421-27 (1976 & Supp. 1980)

Idaho Code

ss 22-2601 to 22-2626 (1977 & Supp. 1980)

Ill. Ann. Stat.

ch. 32, ss 305-331 (Smith-Hurd 1970 & Supp. 1980) (Illinois I)

ch. 32, ss 440-472 (Smith-Hurd 1970 & Supp. 1980) (Illinois II)

Ind. Code Ann.

ss 15-7-1-1 to 15-7-1-33 (Burns 1973 & Supp. 1980)

Iowa Code Ann.

ss 497.1-497.32 (West 1946 & Supp. 1980-81)(Iowa I)

ss 498.1-498.34 (West 1946 & Supp. 1980-81)(Iowa II)

ss 499.1-499.84 (West 1946 & Supp. 1980-81)(Iowa III)

Kans. Stat. Ann.

ss 17-1501 to 17-1519 (1974)(Kansas I)

ss 17-1601 to 17-1636 (1974 & Supp. 1980)(Kansas II)

Ky. Rev. Stat. Ann.

ss 272.020-272.050 (Baldwin 1970)(Kentucky I)

ss 272.101-272.345 (Baldwin 1970 & Supp. 1980)(Kentucky II)

La. Rev. Stat. Ann.

ss 71-88 (West 1973)(Louisiana I)

ss 121-149 (West 1973)(Louisiana II)

Maine Rev. Stat. Ann.

tit. 13, ss 1771-1952 (1964 & Supp. 1980-81)

Md. Corp. & Assns. Code Ann.

ss 5-501 to 5-532 (1975 & Supp. 1980)

Mass. Ann. Laws

ch. 157, ss 1, 2 (Michie/Law Co-op 1979)(Massachusetts I)

ch. 157, ss 3-9 (Michie/Law Co-op 1979)(Massachusetts II)

ch. 157, ss 10-18 (Michie/Law Co-op 1979)(Massachusetts III)

Mich. Comp. Laws

ss 450.98-450.109 (Mich. Stat. Ann., ss 21.99-21.110 (Callaghan
1974 & Supp. 1980-81))

Minn. Stat. Ann.

ss 308.01-308.18 (West 1969 & Supp. 1977)(Minnesota I)

ss 308.51-308.92 (West 1969 & Supp. 1977)(Minnesota II)

Miss. Code Ann.

ss 79-17-1 to 79-17-41 (1972)(Mississippi I)

ss 79-19-1 to 79-19-63 (1972)(Mississippi II)

Mo. Ann. Stat.

ss 274.010-274.300 (Vernon 1959)(Missouri I)

ss 357.010-357.190 (Vernon 1959 & Supp. 1981)(Missouri II)

Mont. Rev. Codes Ann.

ss 14-201 to 14-219 (1947 & Supp. 1977)(Montana I)

ss 14-301 to 14-331 (1947 & Supp. 1977)(Montana II)

ss 14-401 to 14-431 (1947 & Supp. 1977)(Montana III)

Nebr. Rev. Stat.

ss 21-1301 to 21-1306 (1977)(Nebraska I)

ss 21-1401 to 21-1414 (1977)(Nebraska II)

Nev. Rev. Stat.

ss 81.010-81.160 (1979)(Nevada I)

ss 81.170-81.280 (1979)(Nevada II)

ss 81.410-81.540 (1979)(Nevada III)

N.H. Rev. Stat. Ann.

ss 301:1-301:52 (1977)

N.J. Stat. Ann.

ss 4:13-1 to 4:13-50 (West 1973 & Supp. 1980-81)

N.Mex. Stat. Ann.

ss 53-4-1 to 53-4-45 (1978)(New Mexico I)

ss 76-12-1 to 76-12-23 (1978)(New Mexico II)

N.Y. Coop. Corp. Law

ss 1-134 (McKinney 1951 & Supp. 1980-81)

N.C. Gen. Stat.

ss 54-111 to 54-128 (1975)(North Carolina I)

ss 54-129 to 54-166 (1975 & Supp. 1980)(North Carolina II)

N.Dak. Cent. Code

ss 10-15-01 to 10-15-61 (1976 & Supp. 1980)

Ohio Rev. Code Ann.

ss 1729.01-1729.99 (Page 1978 & Supp. 1980)

Okla. Stat. Ann.

tit. 2, ss 331-354 (West 1973) (Oklahoma I)

tit. 2, ss 361-361y (West 1973) (Oklahoma II)

Ore. Rev. Stat.

ss 62.005-62.865 (1977)

Pa. Stat. Ann.

tit. 15, ss 12001-12023 (Purdon 1967 & Supp. 1980-81)

(Pennsylvania I)

tit. 15, ss 12101-12135 (Purdon 1967 & Supp. 1980-81)

(Pennsylvania II)

R.I. Gen. Laws

ss 7-7-1 to 7-7-22 (1969 & Supp. 1980)

S.C. Code

ss 33-45-10 to 33-45-200 (1976)(South Carolina I)

ss 33-47-10 to 33-47-1150 (1976)(South Carolina II)

S.Dak. Comp. Laws Ann.

ss 47-15-1 to 47-20-17 (1967 & Supp. 1980)

Tenn. Code Ann.

ss 43-1801 to 43-1849 (1964 & Supp. 1980)

Tex. Rev. Civ. Stat. Ann.

arts. 1396-50.01(1) to 1396-50.01(46) (Vernon 1980)

(Texas I)

arts. 2514-2524 (Vernon 1965)(Texas II)

arts. 5737-5764 (Vernon 1958 & Supp. 1980-81)(Texas III)

Utah Code Ann.

ss 3-1-1 to 3-1-41 (1953 & Supp. 1980)

Vt. Stat. Ann.

tit. 11, ss 981-1065 (1973 & Supp. 1980)

Va. Code

ss 13.1-301 to 13.1-311.1 (1978)(Virginia I)

ss 13.1-312 to 13.1-345 (1978)(Virginia II)

Wash. Rev. Code Ann.

ss 23.86.010-23.86.230 (1969)(Washington I)

ss 24.32.010-24.32.900 (1969 & Supp. 1979)(Washington II)

W. Va. Code

ss 19-4-1 to 19-4-30 (1977 & Supp. 1980)

Wis. Stat. Ann.

Wyo. Stat.

ss 17-10-101 to 17-10-125 (1977)

³⁹ For the obligation to return net margins to member patrons, see Farmer Cooperative Service, U.S. Department of Agriculture, *Legal Phases of Farmer Cooperatives* 471-480 (1976) (Information 100).

⁴⁰ *Id.* at 102.

⁴¹ *Id.* at 107, quoting *Whitney v. Butler*, 118 U.S. 655 (1886).

⁴² Ala. Code ss 2-10-20 to 2-10-35 (1975 & Supp. 1980)(Alabama I); Conn. Gen. Stat. Ann. ss 33-194 to 33-217 (West 1958 & Supp. 1981) (Connecticut I); Ky. Rev. Stat. ss 272.020-272.050 (Baldwin 1970) (Kentucky I).

⁴³ See, e.g., Fla. Stat. Ann. s 618.09 (West 1977)(Florida I). "A majority vote of a quorum of the *members or stockholders*...is sufficient to adopt or amend the bylaws [which] may provide for...the manner of determining the value of the property interest or the shares of common stock of retiring or expelled members." *Id.* (emphasis added).

⁴⁴ See, e.g., Ind. Code Ann. s 15-7-1-9 (Burns 1973). "The power to adopt...by-laws shall be vested in the *board of directors* [which] bylaws may contain provisions for...the manner of determining the value of a member's interest or shares when expelled, or upon his death or withdrawal from membership." *Id.* (emphasis added).

⁴⁵ Lattin, *The Law of Corporations*, 355 (1971).

⁴⁶ See, e.g., *Lebold v. Inland Steel Co.*, 125 F.2d 369, 373-74 (7th Cir 1941) (majority shareholders dissolved corporation and thereby acquired share in profits of business to which minority would have been entitled had corporation remained in existence).

⁴⁷ See *Chelrob, Inc. v. Barrett*, 293 N.Y. 422, 57 N.E.2d 825 (1944).

⁴⁸ For an analysis of the interaction of the directors' duty of care, negligence, and the business judgment rule, see Judge Shientag's opinion in *Casey v. Woodruff*, 49 N.Y.S.2d 625 (Sup. Ct. 1944).

⁴⁹ See H.R. Rep. No. 413, 91st Cong., 1st Sess. 167-69, reprinted in 1969 U.S. Code Cong. & Ad. News 1820-23 (discussing section 531 of the House-passed version of the 1969 Tax Reform Act, H.R. 13270).

⁵⁰ Conf. Rep. No. 782, 91st Cong. 1st Sess., reprinted in 1969 U.S. Code Cong. & Ad. News 2438.

⁵¹ General Accounting Office, *Family Farmers Need Cooperatives—But Some Issues Need to be Resolved*, 39-46 (1979).

⁵² *Id.* at 44.

⁵³ *Id.*

⁵⁴ Of the 85 cooperative statutes, three did not contain any provisions relating to equity redemption. See notes 38 and 42, *supra*.

⁵⁵ For a discussion of applicable common law principles, see notes 40 through 48, *supra*.

⁵⁶ Most State cooperative statutes contain the following provision, which makes the State's general corporation law controlling where the cooperative statute is silent: "The provisions of the general corporation laws and all powers and rights thereunder shall apply to the associations organized hereunder, except where such provisions are in conflict or inconsistent with the express provisions of this [cooperative statute]." Tenn. Code Ann. s 43-1845 (1964).

⁵⁷ If the retained equity interest of the member is represented by written document, then the terms and conditions of that contract establish the rights and duties of the parties.

⁵⁸ Ark. Stat. Ann. s 64-1510 (1966)(Arkansas I); Kans. Stat. Ann. s 17-1512 (1974)(Kansas I); Mass. Ann. Laws, ch. 157, s 2 (Michie/Law Coop. 1979)(Massachusetts I); Mich. Comp. Laws s 450.101 (Mich. Stat. Ann. s 21.102 (Callaghan 1974)).

⁵⁹ Iowa Code Ann. s 479.19 (West 1946)(Iowa I); Mass. Ann. Laws, ch. 157, s 6 (Michie/Law Coop. 1979)(Massachusetts II); Mo. Ann. Stat. s 357.130 (Vernon 1966)(Missouri II); Mont. Rev. Codes Ann. s 14-213 (1947)(Montana I); N.C. Gen. Stat. s 54-126 (1975)(North Carolina I); S.C. Code s 33-45-180 (1946)(South Carolina I); Va. Code s 13.1-306 (1978)(Virginia I); Wyo. Stat. s 17-10-115 (1977).

⁶⁰ Del. Code Ann. tit. 3, s 8537 (1974) (granting directors broad authority over revolving reserve funds); Md. Corp. and Assns Code Ann. ss 5-504, 5-525 (1975 & Supp. 1980-81) (equity fund for nonmember patrons only and see note 122, *infra*); Mass. Ann. Laws ch. 157, s 13 (Michie/Law Coop. 1979)(Massachusetts III) (redemption addressed in bylaws); Minn. Stat. Ann. s 308.12(1) & (4) (West 1969 & Supp. 1977)(Minnesota I) (net proceeds distributable in revolving fund certificates); Nebr. Rev. Stat. s 21-1302 (1977) (Nebraska I) (redemption procedures in articles and bylaws); Pa. Stat. Ann. tit. 15, s 12015(VI) (Purdon 1967)(Pennsylvania I) ("profit dividends" paid per bylaws); Wash. Rev. Code Ann. s 23.86.160 (1969)(Washington I) (permitting distributions in the form of capital stock or equity certificates) and ss 24.32.060, 24.32.160 (1969)(Washington II) (authorizing bylaws or marketing agreement to govern redemption).

⁶¹ E.g., Colo. Rev. Stat. s 7-55-103 (1973)(Colorado I) and s 7-57-103 (1973)(Colorado III) (identical provisions stating that bylaws shall contain the method of determining members' property interests in instances of withdrawal, expulsion, or death).

⁶² E.g., N.Mex. Stat. Ann. s 53-4-26 (1978) (New Mexico II) (procedures for transfer of shares and membership upon withdrawal).

⁶³ See, e.g., Ohio Rev. Code Ann., s. 1729.11(I) (Page 1978).

⁶⁴ U.S. Department of Agriculture, *supra* note 39, at 568.

⁶⁵ 38 Colo. App. 326, 563 P.2d 30 (1977).

⁶⁶ 563 P.2d at 33 n.1; see note 64 and accompanying text *supra*, for the bylaw provision.

⁶⁷ "[The bylaws] may also provide for any of the following matters: ...the manner of determining the value of a member's interest." Ohio Rev. Code Ann. s 1729.11 (Page 1978).

⁶⁸ J. Weiss, "Federal Regulation Affecting Distribution and Subsequent Sale of Securities of Agricultural Cooperatives," 20 *Cooperative Accountant* 30 (1967).

⁶⁹ See Chapter 2, *supra*, and N. Griffin and others, p. 38.

⁷⁰ Hanna, *The Law of Cooperative Marketing Associations*, 43-46 (1931). For the complete text of the Standard Act, see the Bingham Cooperative Marketing Act, 1922 Ky. Acts, ch. 1. The Kentucky version of the Standard Act was upheld against constitutional challenge in *Liberty Warehouse Co. v. Burley Tobacco Growers Coop. Marketing Assn.* 276 U.S. 71 (1928). Aaron Sapiro argued on behalf of Burley Tobacco Growers in that case.

⁷¹ Nine States adopted the nonmandatory provision without amendment. Calif. Food & Agric. Code s 54112 (West 1968)(California I); Colo. Rev. Stat. s 7-56-111(i) (1973)(Colorado II); Ill. Ann. Stat. ch. 32, s 449(i) (Smith-Hurd 1970)(Illinois II); N.H. Rev. Stat. Ann. s 301:11 (IX) (1977); Ohio Rev. Code Ann. s 1729.11(I) (Page 1978); Okla. Stat. Ann. tit. 2, s 336 (West 1973)(Oklahoma I); Tenn. Code Ann. s 43-1814(h) (1964); Vt. Stat. Ann. tit. 11, s 1001(8) (1973); W. Va. Code s 19-4-8(i) (1977).

Ten States eliminated the language "the purchase at a price fixed." Ala. Code s 2-10-58(13) (1975)(Alabama II); Ark. Stat. Ann. s 77-910 (1957 & Supp. 1980)(Arkansas II); Ga. Code Ann. s 65-207 (1979); Idaho Code s 22-2610 (1977); Ky. Rev. Stat. s 272.151 (Baldwin 1970)(Kentucky II); Miss. Code Ann. s 79-19-17 (1972)(Mississippi II); Mont. Rev. Codes Ann. s 14-410(i) (1947 & Supp. 1977)(Montana III); N.C. Gen. Stat. s 54-136 (1975 & Supp. 1980)(North Carolina II); S.C. Code s 33-47-810 (1976)(South Carolina II); Tex. Rev. Civ. Stat. Ann. art. 5746 (Vernon 1958) (Texas III).

Four States deleted the phrase "the purchase at a price fixed by conclusive appraisal by the board of directors." Ariz. Rev. Stat. Ann. s 10-706 (1977); Fla. Stat. Ann. s 619.06 (West 1977)(Florida II); Nev. Rev. Stat. s 81.090 (Nevada I) and s 81.480 (Nevada III) (1979).

Six States deleted the entire phrase "at the option of the association, the purchase at a price fixed by conclusive appraisal by the board of directors." Ark. Stat. Ann. s 77-1010(j) (1957 & Supp. 1980) (Arkansas III); La. Rev. Stat. Ann. s 78(10) (Louisiana I) and s 0129(9)(Louisiana II) (West 1973); Mo. Stat. Ann. s 274.090(1)(17) (Vernon 1959)(Missouri I); N.Mex. Stat. Ann. s 76-12-10(i) (1978)(New Mexico II); Okla. Stat. Ann. tit. 2, s 361(i) (West 1973)(Oklahoma II).

Until 1971, Indiana had an equity redemption section similar to that presented in the text. Although amended, the statute still retains some of the Standard Act's

terminology. See Ind. Code Ann. s 15-7-1-9 (Burns 1973)

⁷² See *Driscoll v. East-West Dairymen's Ass'n*, 52 Cal. App. 2d 468, 126 P.2d (1942).

⁷³ See note 71 *supra*.

⁷⁴ "or, at the option of the association, the purchase at a fixed price by conclusive appraisal by a *board of appraisers*. But in no case shall it be provided that the value or price of the stock shall be determined by any board on which the association shall have any greater voice than the member or his representative." N.H. Rev. Stat. Ann. s 301:11 (IX) (1977) and Vt. Stat. Ann. tit 11, s 1001 (1973) (emphasis added).

⁷⁵ *Victor J. Bloede Co. v. Bloede*, 84 Md. 129, 34 A. 1127 (1896).

⁷⁶ *Lawson v. Household Finance Corp.*, 17 Del. Ch. 343, 152 A. 723 (Sup. Ct. 1930).

⁷⁷ *Case-Swayne Co. v. Sunkist Growers, Inc.*, 389 U.S. 384, 393-94 (1967).

⁷⁸ Kans. Stat. Ann. s 17-1609 (1974)(Kansas II).

⁷⁹ "and the conditions and terms for the repurchase by the association from its stockholders of their stock upon their disqualification as stockholders." Calif. Food & Agric. Code s 54122 (West 1968)(California I).

⁸⁰ J. Hanna, *The Law of Cooperative Marketing Associations*, 67-68 (1931) (footnote omitted).

⁸¹ Ark. Stat. Ann. s 77-1010 (1957 and Supp. 1980)(Arkansas III); Fla. Stat. Ann. s 619.06 (West 1977)(Florida II); La. Rev. Stat. Ann. s 129 (West 1973)(Louisiana II); Nev. Rev. Stat. s 81.090 (Nevada I) and s 81.480 (Nevada III)(1979); N.Mex. Stat. Ann. s 76-12-10 (1978)(New Mexico II); Okla. Stat. Ann. tit. 2, s 361i (West 1973)(Oklahoma II); W. Va. Code s 19-4-8 (1977).

⁸² Ala. Code s 2-10-58 (1975)(Alabama II); Ariz. Rev. Stat. Ann. s 10-710 (1977); Ark. Stat. Ann. s 910 (1957 and Supp. 1980)(Arkansas II); Colo. Rev. Stat. s 7-56-111 (1973)(Colorado II); Ga. Code Ann. s 65-207 (1979); Kans. Stat. Ann. s 17-1609 (1974)(Kansas II); Mont. Rev. Codes Ann. s 14-410 (1974 and Supp. 1977)(Montana III); Ohio Rev. Code Ann. s 1729.11 (Page 1978); Okla. Stat. Ann. tit. 2, s 336 (West 1973)(Oklahoma I); Tenn. Code Ann. s 43-1814 (1964); Tex. Rev. Civ. Stat. Ann. art. 5746 (Vernon 1958)(Texas III).

⁸³ Calif. Food & Agric. Code s 54122 (West 1968) (California I); Ky. Rev. Stat. s 272.151 (Baldwin 1970)(Kentucky II); Idaho Code s 22-2610 (1977); Ill. Ann. Stat. ch. 32, s 449 (Smith-Hurd 1970)(Illinois II); La. Rev. Stat. Ann. s 78 (West 1973)(Louisiana I); Miss. Code Ann. s 79-19-17 (1972)(Mississippi II); Mo. Ann. Stat. s 272.090 (Vernon 1959)(Missouri I); Nebr. Rev. Stat. s 21-1406 (1977)(Nebraska II); N.C. Gen. Stat. s 54-136 (1975 & Supp. 1979)(North Carolina II); 1981 S.C. Acts 58 (April 30, 1981) (South Carolina II). The nature of these amendments is the subject of the following discussion.

⁸⁴ One of two Florida statutes employs language substantially the same as that of the Standard Act's mandatory provision; however, the provision is permissive, not mandatory. Fla. Stat. Ann. s 618.09 (West 1977)(Florida I).

⁸⁵ Ky. Rev. Stat. s 272.151 (Baldwin 1970)(Kentucky II)(emphasis added). "*Unless provided otherwise in an association's bylaws, the board shall....*"

⁸⁶ Ill. Ann. Stat. ch. 32, s 449 (Smith-Hurd 1970)(Illinois II)(emphasis added). "In case of the withdrawal or expulsion of a member, *unless otherwise limited or restricted in the articles of incorporation or any amendment thereto,....*"

⁸⁷ Mo. Ann. Stat. s 272.090 (Vernon 1959)(Missouri I)(emphasis added). "In case of death, withdrawal, or expulsion of a member, the board of directors shall, *when authorized by its membership,....*"

⁸⁸ Calif. Food & Agric. Code s 54122 (West 1968)(California I).

⁸⁹ "In any case of the expulsion of a member, *and where the bylaws do not provide any procedure or penalty, the board of directors....*" *Id.*(emphasis added).

⁹⁰ Mo. Ann. Stat. s 274.090 (Vernon 1959)(Missouri I); Nebr. Rev. Stat. s 21-1406 (1977)(Nebraska II); N.C. Gen. Stat. s 54-136 (1975 & Supp. 1979)(North Carolina II); 1981 S.C. Acts 58 (April 30, 1981) (South Carolina II).

⁹¹ *Id.*

⁹² N.Dak. Cent. Code s 10-15-33(5) (1976).

⁹³ A bylaw having this effect is discussed in note 64 and accompanying text, *supra*.

⁹⁴ Ill. Ann. Stat. ch. 32, s 449 (Smith-Hurd 1970)(Illinois II).

⁹⁵ Nebr. Rev. Stat. s 21-1406 (1977)(Nebraska II).

⁹⁶ "[T]he board of directors...shall, within 1 year, cause to be paid to such member or his estate one hundred percent (100 percent) of all amounts due him for any and all raw products which have been delivered by him to the association. All other amounts which might be due for capital stock, certificates of interest, reserves, or on account of any other equity, shall be payable in accordance with the charter or bylaws of the association." N.C. Gen. Stat. s 54-136 (1975 & Supp. 1979)(North Carolina II); 1981 S.C. Acts 58 (April 30, 1981)(South Carolina II).

⁹⁷ "which shall be paid to him [withdrawing or expelled member] in money, preferred stock in the association, or by such other evidence of the obligation as the bylaws of the association may permit...." Idaho Code s 22-2610 (1977).

⁹⁸ "and the association may pay 'thereafter in cash or by certificate of indebtedness to be thereafter paid from the income of the association.'" Miss. Code Ann. s 79-19-17 (1972)(Mississippi II).

⁹⁹ See notes 97 and 98, *supra*.

¹⁰⁰ “Unless provided otherwise in an association’s bylaws, the board of directors shall...determine the manner in which the association shall pay the member the value of his interest.” Ky. Rev. Stat. s 212.151 (Baldwin 1970)(Kentucky II).

¹⁰¹ Mo. Ann. Stat. s 274.090 (Vernon 1959)(Missouri I).

¹⁰² La. Rev. Stat. Ann. s 78 (West 1973)(Louisiana I). The other Louisiana cooperative statute had a similar provision. See 1922 La. Acts, No. 57, s 9. In 1940, the mandatory provision was deleted entirely, 1940 La. Acts, No. 226, s 1, and the current law may be found at La. Rev. Stat. Ann. s 129 (West 1973)(Louisiana II).

¹⁰³ Nebr. Rev. Stat. s 21-1406 (1977)(Nebraska II).

¹⁰⁴ See note 80 and accompanying text, *supra*, for a discussion of the same aspect of the nonmandatory provision.

¹⁰⁵ D.C. Code Ann. ss 29-825 to 29-830 (1973); N.Mex. Stat. Ann. ss 53-4-26 to 53-4-30 (1978)(New Mexico I); Tex. Rev. Civ. Stat. Ann. art. 1396-50.01 (1) to 1396-50.01(34)(Vernon 1980)(Texas I).

¹⁰⁶ D.C. Code Ann. s 29-832 (1973); Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(34)(Vernon 1980)(Texas I).

¹⁰⁷ *Id.*

¹⁰⁸ D.C. Code Ann. s 29-809 (1973); N.Mex. Stat. Ann. s 53-4-9 (1978)(New Mexico I); Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(12) (Vernon 1980) (Texas I).

¹⁰⁹ N.Mex. Stat. Ann. s 53-4-27 (1978)(New Mexico I).

¹¹⁰ D.C. Code Ann. s 29-827 (1973); Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(30) (Vernon 1980)(Texas I).

¹¹¹ D.C. Code Ann. s 29-827 (1973); N.Mex. Stat. Ann. s 53-4-27(1978) (New Mexico I).

¹¹² Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(30) (Vernon 1980)(Texas I).

¹¹³ Notes 111 and 112 *supra*. Texas does not permit recall if the cooperative’s solvency would be jeopardized. Texas also has a special provision relating to recall of *investment* certificates, distinguishing those instruments from *membership* certificates. Investment certificates differ from membership certificates in that investment certificates do not necessarily reflect net savings distributions on the basis of patronage. See Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(2)(6), (7), (8) & (9) (Vernon 1980)(Texas I).

¹¹⁴ D.C. Code Ann. s 29-826 (1973). New Mexico adds that such repurchase will be made out of “surplus funds.” N.Mex. Stat. Ann. s 53-4-26 (1978)(New Mexico I). Texas limits this provision to membership certificates only and limits the directors’ repurchase power to a 90-day period. Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(29)(a) (Vernon 1980) (Texas I).

¹¹⁵ D.C. Code Ann. s 29-826 (1973).

¹¹⁶ N.Mex. Stat. Ann. s 53-4-26 (1978)(New Mexico I).

¹¹⁷ Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(29)(b) (Vernon 1980) (Texas I).

¹¹⁸ Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(33) (Vernon 1980)(Texas I).

¹¹⁹ D.C. Code s 29-830 (1973) and N.Mex. Stat. Ann. s 53-4-30 (1978) (New Mexico I).

¹²⁰ Under the New Mexico law, an association would be required to repurchase only if there were sufficient surplus funds. N.Mex. Stat. Ann. s 53-4-28 (1978)(New Mexico I).

¹²¹ D.C. Code s 19-829 (1973); N.Mex. Stat. Ann. s 53-4-28 (1978)(New Mexico I); Tex. Rev. Civ. Stat. Ann. art. 1396-50.01(31) (Vernon 1980) (Texas I).

¹²² N.Dak. Cent. Code s 10-15-33 (1976); S.Dak. Comp. Laws Ann. s 47-16-52 (1967); Wis. Stat. Ann. s 185.45 (West 1957).

The Alaska and Oregon laws are substantially the same, except that they substitute the following language after the words "letters of advice": "...or other securities or certificates issued by the cooperative or by any affiliated domestic or foreign cooperative association whether or not incorporated under this chapter." Alaska Stat. s 10.15.280 (1976); Ore. Rev. Stat. s 62.415(2) (1977).

Maryland, too, has a similar provision, authorizing payment of net savings in the various forms previously listed except it has the following closing language: "...or other securities or certificates issued by the cooperative or by any affiliated Maryland or foreign cooperative." Md. Corp. & Assns. Code Ann. s 525 (1975 & Supp. 1980). The Maryland equity redemption law is not, however, similar to the North Central or Pacific Statutes in other respects.

¹²³ Alaska Stat. s 10.15.100 (1968); N.Dak. Cent. Code s 10-15-20 (1976); Ore. Rev. Stat. s 62.235 (1977); S.Dak. Comp. Laws Ann. s 47-16-23 (1967); Wis. Stat. Ann. s 185.21(5) (West 1957 & Supp. 1980-81).

¹²⁴ Alaska Stat. s 10.15.100 (1968); N.Dak. Cent. Code s 10-15-20(3) (1976); Ore. Rev. Stat. Ann. s 62.235 (1977); S.Dak. Comp. Laws Ann. s 47-16-24 (1967); Wis. Stat. Ann. s 185.21(5) (West 1957 & Supp. 1980-81).

¹²⁵ N.Dak. Cent. Code s 10-15-20(3) (1976); S.Dak. Comp. Laws Ann. s 47-16-24 (1967); Wis. Stat. Ann. s 185.21 (West 1957 & Supp. 1980-81).

¹²⁶ Alaska Stat. 10.15.100 (1968); Ore. Rev. Stat. s 62.235 (1977).

¹²⁷ "No acquisition, recall or redemption of stock...may be made if the result would be to bring the value of the remaining assets of the cooperative below the aggregate of its indebtedness." Alaska Stat. 10.15.105 (1968); Ore. Rev. Stat. s 62.235 (1977).

"If the remaining assets would be less than the aggregate amount payable to creditors and persons holding stock with preferential rights upon liquidation, no

stock shall be acquired, recalled, exchanged or redeemed for a consideration other than stock or certificates of equity interest of equal or subordinate rank.” N.Dak. Cent. Code s 10-15-20(3) (1976); S.Dak. Comp. Laws Ann. s 47-16-24 (1967); Wis. Stat. Ann. s 185.21(5) (West 1957 & Supp. 1980-81).

Another more rigorous limitation on an association’s voting stock recall power prohibits recall if the debts of the association exceed 50 percent of assets. “Except when its debts exceed 50 percent of its assets, an association may purchase for cash its voting stock at book value or par value, whichever is less, and may call such stock for redemption on the same basis pursuant to a plan for rotating ownership of such stock set forth in its articles of incorporation or in its bylaws. The determination of book value by the board of directors shall be incontestable except for fraud.” Va. Code s 13.1-322 (1978)(Virginia II).

¹²⁸ “Provisions for qualifications, requirements, method of acceptance, terms, conditions, *termination*, and other incidents of membership shall be set forth in the bylaws.” N.Dak. Cent. Code s 10-15-15 (1977); S.Dak. Comp. Laws Ann. s 47-16-1 (1967); Wis. Stat. Ann. s 185.11(4) (West 1957) (emphasis added).

For a case holding that death of a member was not a constructive termination of membership, thereby forcing the cooperative to pay within 1 year the full value of the decedent’s interest, see *Evanenko v. Farmers Union Elevator*, 191 N.W.2d 258 (N.D. 1971). The court reasoned that the bylaw provision stating that the board of directors has the power to define termination meant that until the board declared the deceased member’s membership terminated, another bylaw provision requiring cash payment on termination would not apply. *Id.* 260-62.

Once the directors make that declaration, however, a member’s interest is not subject to divestment. *Callaway v. Farmers’ Union Cooperative Assn.*, 119 Nebr. 1, 226 N.W. 802 (1929).

¹²⁹ Alaska Stat. s 10.15.100 (1968); Ore. Rev. Stat. s 62.235 (1977) (emphasis added).

¹³⁰ Ala. Code s 2-10-98 (1975)(Alabama III); Miss. Code Ann. s 79-17-23 (1972)(Mississippi II)(limiting the scope of the provision to common stock or preferred stock enjoying voting rights).

¹³¹ But see notes 80, 104 and accompanying text, *supra*.

¹³² See note 98 and accompanying text, *supra*.

¹³³ Hawaii Rev. Stat. s 421-8 (1976); Maine Rev. Stat. Ann. tit. 13, s 01826 (1964). Rhode Island contains the same provision relating to issuance, retirement, and transfer of cooperative stock, R.I. Gen. Laws s 07-7-3(6) (1969), but differs in other respects.

¹³⁴ Hawaii Rev. Stat. s 421-11(e) (1976); Maine Rev. Stat. Ann. tit. 13, s 1826(5) (1964).

¹³⁵ Hawaii Rev. Stat. s 421-11(d) (1976); Maine Rev. Stat. Ann. tit. 13, s 1826 (1964).

Both Virginia and Pennsylvania have provisions relating to redemption of a mem-

ber's "membership interest" almost identical to that contained in the Hawaii and Maine statutes. See Va. Code s 13.1-322(f) (1978)(Virginia II) and Pa. Stat. Ann. tit. 15, s 12116(b) (Purdon Supp. 1980-81)(Pennsylvania II). In other respects, the Virginia and Pennsylvania statutes differ from those of Hawaii and Maine.

¹³⁶ See notes 71, 73 and accompanying text, *supra*.

¹³⁷ N.Mex. Stat. Ann. s 76-12-11(b) (1978)(New Mexico II); Okla. Stat. Ann. tit. 2, s 361j(b) (1973)(Oklahoma II). The clause relating to approval of a member's proposed transferee was also present in the Hawaii and Maine statutes. See note 135, *supra*.

¹³⁸ Va. Code s 13.1-322(i) (1978)(Virginia II); Utah Code Ann. s 3-1-11(f) (1953). Pennsylvania also permits such certificates to bear an annual interest rate not exceeding 6 percent; however, it deletes the concluding phrase "upon such terms and conditions as shall be provided for in the bylaws." Pa. Stat. Ann. tit. 15, s 12114(c) (Purdon Supp. 1980-81)(Pennsylvania II).

¹³⁹ See Va. Code s 13.1-322(f) (membership interest); (g) (nonvoting stock); (i) (equity certificates); (j) (joint tenancy) (1978) (Virginia II).

¹⁴⁰ Pa. Stat. Ann. tit. 15, s 12115 (Purdon Supp. 1980-81) (Pennsylvania II).

¹⁴¹ Pa. Stat. Ann. tit. 15, s 12116 (Purdon Supp. 1980-81) (Pennsylvania II).

¹⁴² Pa. Stat. Ann. tit. 15, s 12114 (Purdon Supp. 1980-81) (Pennsylvania II).

¹⁴³ E.g., Nev. Rev. Stat. ss 81.230-81.270 (1979)(Nevada II) (detailed provisions dealing with redemption for instances of death, forfeiture, withdrawal, expulsion, and interests subject to execution, attachment, and garnishment).

¹⁴⁴ E.g., "Distributions [of net margins] may be credited on account of the issuance to members or patrons of capital stock or other securities of the corporation." N.Y. Coop. Corp. Law s 72 (McKinney 1951).

¹⁴⁵ Calif. Corp. Code ss 12803, 12805(d) (1977)(California I) (stock and memberships, repurchased on death); Iowa Code Ann. ss 498.12, 498.13 and ss 499.19, 499.30, 499.33, 499.35 (1946 & Supp. 1980-81)(Iowa II and III) (two statutes with latter highlighted in notes 153-156 and accompanying text, *infra*); Nev. Rev. Stat. s 81.480(3) & (10) (1979)(Nevada III) (mandatory redemption for expulsion and see notes 71, 73 & 81 *supra*); N.J. Stat. Ann. ss 4:13-18, 4:13-31 (West 1973) (general and special redemption procedures); R.I. Gen. Laws ss 7-7-9, 7-7-3(6), 7-7-12 (1969) (death, withdrawal, expulsion provisions and see note 133, *supra*); Tex. Rev. Civ. Stat. Ann. art. 2522 (Vernon 1965)(Texas II) (value on withdrawal equal to money contributed to working capital); W. Va. Code s 19-4-8 (1977) (allows sale of property interests at public auction under certain circumstances; see notes 71 & 81 *supra*).

¹⁴⁶ J. Hanna, *The Law of Cooperative Marketing Associations* 44 n.35 (1931) and see note 70 and accompanying text, *supra*.

¹⁴⁷ See notes 71-104 and accompanying text, *supra*.

¹⁴⁸ 1931 Ind. Acts, ch. 34, s 7, p. 85.

- ¹⁴⁹ 1971 Ind. Acts, Pub. L. No. 201, s 5(j) p. 786.
- ¹⁵⁰ Nebr. Rev. Stat. s 21-1406 (1977)(Nebraska II).
- ¹⁵¹ N.C. Gen. Stat. s 54-136 (Supp. 1980-81)(North Carolina II).
- ¹⁵² 1981 S.C. Acts 58 (April 30, 1981)(South Carolina II).
- ¹⁵³ 1963 Iowa Acts, ch. 291, s 1, p. 380.
- ¹⁵⁴ Iowa Code Ann. s 499-30 (West Supp. 1980-81)(Iowa III).
- ¹⁵⁵ 1961 Iowa Acts. ch. 250, s 1, p. 263(Iowa III). The Iowa statute uses the term "deferred patronage dividends," rather than the term "deferred patronage refunds." It is assumed that the Iowa legislature intended the provision to apply to both per unit capital retains and deferred patronage dividends; hence, the substitution of the board term "deferred patronage refunds."
- ¹⁵⁶ Iowa Code Ann. s 499.33 (West Supp. 1980-81)(Iowa III).
- ¹⁵⁷ 1973 Colo. Sess. Laws, Ch. 121, s 1, 428.
- ¹⁵⁸ Colo. Rev. Stat. s 7-55-103(l) (1973)(Colorado I).
- ¹⁵⁹ Colo. Rev. Stat. ss 7-57-101 to 7-57-106 (1973)(Colorado III). This second statute states that cooperatives incorporated under it shall "adopt bylaws as set forth" in the first cooperative statute. *Id.* ss 7-57-103.
- ¹⁶⁰ See 18 *Am. Jur.* 2d 175, Cooperative Associations, s 18.
- ¹⁶¹ 139 So.2d 639 (Miss. 1962).
- ¹⁶² *Id.*, See also *Howard v. Eatonton Cooperative Feed Co.*, 226 Ga. 788, 177 S.E.2d 658 (1970); *Evanenko v. Farmers Union Elevator*, 191 N.W.2d 258 (ND 1971).
- ¹⁶³ 3 Bankruptcy Reporter 445 (1980).
- ¹⁶⁴ *Id.*, 447.
- ¹⁶⁵ *Id.*, 449.
- ¹⁶⁶ 128 Cal. App. 265, 16 P.2d. 1040 (1932).
- ¹⁶⁷ 61 NJ 596, 297 A.2d 566 (1972), *modifying and remanding* 115 N.J. Super 424, 280 A.2d 193 (App. Div. 1971).
- ¹⁶⁸ *Id.*, 568-69. See also, *Whitney v. Farmers Coop Grain Co.* 110 Nebr. 157, 193 N.W. 103 (1923); *Loch v. Paola Farmers' Union Coop Creamery*, 130 Kans. 136, 285 P. 523 (1930).
- ¹⁶⁹ 191 N.W.2d 258 (N.d. 1971).

¹⁷⁰ *Id.*, 260.

¹⁷¹ *Id.*, 261-62.

¹⁷² *Id.*, 262.

¹⁷³ 208 Kans. 129, 490 P.2d 376 (1971).

¹⁷⁴ *Id.*, 381.

¹⁷⁵ 345 S.W.2d 16 (Ark. 1961).

¹⁷⁶ *Id.*, 17.

¹⁷⁷ *Id.*, 19.

¹⁷⁸ 19-20.

¹⁷⁹ 370 S.W.2d 62 (Ark. 1963).

¹⁸⁰ *Id.*, 65.

¹⁸¹ *Id.*, 66.

¹⁸² 327 So2d 212 (Fla. 1976), *rev'g* 311 So.2d 183 (Fla. App. 1975).

¹⁸³ *Furze v. Lake Region Packing Association, Inc.*, 311 So.2d 183 (Fla. App. 1975).

¹⁸⁴ *Id.*, 186.

¹⁸⁵ *Lake Region Packing Association, Inc., v. Furze*, *supra* note 23, 215.

¹⁸⁶ *Id.*, 217.

VII. EXTERNAL INFLUENCES

Federated Cooperatives

The financing methods of federated cooperatives, ones that have other cooperatives as members, affect their members' redemption plans. In many cases, it is difficult for local cooperatives to redeem equity while supporting their federated cooperatives, unless the federated also redeems the local's equity. Farmer cooperatives' investment in other cooperatives, mostly retained patronage refunds, was about \$1.6 billion in 1976, roughly 8 percent of total assets and 20.4 percent of net worth. Among commodity classifications, farm supply and grain cooperatives had the highest average, 12 to 14 percent of assets or about 25 percent of net worth. Sugar cooperatives had the lowest average, 0.1 percent of total assets invested in other cooperatives.¹

Nearly one-fifth of all farmer cooperatives had no such investments. But some individual local cooperatives, especially farm supply cooperatives that have been long-time federation members or have had substantial losses at the local level, often have had a third to a half of their total assets invested in federated cooperatives. Redemption policies of these federated cooperatives control or set the boundaries on what their members can redeem.

The Need to Adjust Equity in Federated Cooperatives

Federated cooperatives are one step removed from most farmer-members, but they affect redemption of farmers' equity through their influence on their members' equity redemption practices. This occurs because of (1) the federated cooperatives' financing methods and performance, including equity redemption; (2) their leadership by example; and (3) the services they offer members.

Most federated cooperatives have long-term and stable associations with their member cooperatives, only a small number of whom leave or join the federation each year. Members are, of course, subject to business failures, mergers, or changes in federation affiliation, but these occur much less frequently than farmer memberships change in local cooperatives. Therefore, redemption of equities of inactive members is less of a concern for federated cooperatives. Even so, disparities exist. Different lengths of membership and rates of growth contribute to investment differences among members.

Within a federation, members providing more than their share of investments would have correspondingly fewer funds available for all other purposes, including their own equity redemption programs. Conversely, cooperatives underinvested in their federated would have more funds for other purposes. The under- and overinvestments of federation members is a question of fairness. A fair share investment from each member does not, of course, reduce the total requirement, only distributes it equitably among the membership. The members of a federation have the

power through electing the board of directors to decide upon a suitable financing system.

Members and directors of local cooperatives need to understand clearly the relationship of the member cooperative to its federation. For example, farmer-members may see little change in their cooperative's facilities, but through its investments in the federated cooperative, the local cooperative may have gained a greater degree of control of the farm supply and marketing distribution system. The local cooperative, in turn, needs more equity investment from its members to support the combined needs of local and federated operations.

Mergers and other organizational changes have created cooperatives with hundreds of members—both cooperatives and individual farmers. Programs should apply uniformly to both types of members, so that one class of members does not subsidize the other. More standardized policies and programs are required. Reacting to redemption needs on a case-by-case basis is not feasible for federations with a large and mixed membership.

Methods of Adjusting Members' Equity

Although some federated cooperatives have no systematic program for adjusting members' equity, others use a range of methods, including those discussed in chapters III and IV. Revolving fund plans are the most common method, but they are not used by some of the largest cooperatives. Additional redemption programs have been adapted to federated cooperatives.

Participation Plans—Federated cooperatives often assist member cooperatives financially unable to redeem the equities of inactive members. Some federated cooperatives have purchased preferred stock in these associations or have made other financial arrangements to help members with estate redemptions. This assistance usually has been handled on a case-by-case basis.

Some assistance policies have developed into more comprehensive programs. A growing number of federated cooperatives have adopted programs in which they systematically participate in their members' equity redemption. Some cover only redemption of estates, while other include redemption of the equity of retired farmers, usually those reaching a specific age such as 65 or 70. Two large federations with redemption programs that participate in both estate and age redemptions are Farmland Industries, whose plan has been in effect for about 8 years, and CENEX, whose plan is in its second year.

In these plans, when a local cooperative redeems qualified equity held by one of its members, the federated cooperative redeems a proportion of the equity equal to the ratio of the local's investment in the regional to the local's total equity or, usually, total allocated equity. A local with total allocated equity of \$100,000 and an investment of \$20,000 in a re-

gional with a participation plan would receive \$2,000 in equity redemption from the federated cooperative when faced with redeeming \$10,000 held by an estate.

All participation plans are voluntary. Some federated cooperatives have additional equity redemption plans such as revolving funds. Others rely only on their participation plans for equity redemption. In some cases, the amount of yearly equity redemptions under the plan is limited to a specific percentage of a federated cooperative's patronage refunds. Other plans have no limit. Some cooperatives are considering expanding their plans to participate in the equity redemptions of members' revolving funds or other systematic redemption plans.

Because of the large size of the cooperatives adopting participation plans and the number of their cooperative members, such plans are an important development. Over time, these plans can make significant changes in the equity redemption performance of member cooperatives.

The immediate impact on member cooperatives is obvious, but the long-run effect may not be. When only a participation plan is used by a federated cooperative, a member cooperative could maximize its redemption from the federated cooperative by adjusting its redemption program to match the federated's plan. Participation plans could discourage equity redemption except for equities covered by the plan.

For example, a member cooperative with a short revolving period would have retired a sizeable share of its older members' equity. Relatively less of its equity would be held by estates and older members than in a cooperative without an active equity redemption plan. Thus, cooperatives with short revolving periods would be tempted to stop revolving and limit equity redemption only to equities covered by the participation plan, so as to share in the federated's redemption program. Obviously, this participation program not only improves the redemption performance of some but also may restrict the performance of others.

Participation plans were established especially to help the cooperatives having difficulties redeeming equities held by estates. Members of federated cooperatives need to understand that participation plans should not limit their equity redemption programs; conversely, federated cooperatives should understand how the participation plan may affect their members' equity redemption policies over time.

Separate Equity Accounts—Some local cooperatives have split their equity accounts—one for retained patronage refunds from local operations and another for refunds from their federated cooperative's operations. Members receive separate patronage refund allocations from the local for the federated and local cooperative operations. Separate accounts demonstrate to farmer-members the source of their equities and the relative size of their investments. They also provide a comparison of local and federated cooperatives' performance, including equity redemption.

Separate equity accounts imply that farmer-members' equity in each account will be redeemed separately, depending on the performance and needs of each cooperative. However, during financial difficulties, the local cooperative's economic condition often takes precedence over strict adherence to the separate redemption procedure for each equity account.

Separate equity accounts complicate the allocation and redemption processes; their duplication is a major objection to them. Membership in more than one federation further complicates the process. When local cooperatives initiate separate equity funds independently of the federated cooperative, lack of coordination causes problems such as in redeeming estates. In these circumstances, use of separate equity accounts is declining.

Where a federated cooperative encourages separate equity funds and coordinates its policies with its members, dual equity systems have operated satisfactorily. For example, the Farmers Union Grain Terminal Association (GTA) has both farmer and cooperative members. Its member cooperatives allocate patronage refunds received from GTA to their farmer-members. GTA redeems equity of retired members based on age, regardless of whether they are direct members of GTA or members of locals.

Cash Patronage Refunds—Several federated cooperatives have consistently paid a high proportion of their patronage refunds in cash. Cooperatives with this policy generally have had little or no equity redemption. For example, only equity of organizations no longer qualifying for membership may be redeemed.

Under a policy of high cash refunds and little equity redemption, the total amount of retained patronage refunds members have invested in their federated cooperative would continue to increase. Compared with their patronage, new and growing member cooperatives would be underinvested, and long-time, slower growing members would be overinvested.

If a cooperative with a high cash patronage refund policy decides to adjust members' equity investment to their proportionate use of the cooperative, the cash flow to individual members would temporarily change, shifting from current patrons (assuming that many of them would be underinvested) to inactive and overinvested members.

Union Equity Cooperative Exchange, a federated grain cooperative, adopted a variable cash patronage refund program 5 years ago. The plan's purpose is to adjust member investments based on volume of grain marketed through the federated. This plan is discussed under the base capital plan in chapter III and briefly described in appendix B.

Leadership of Federated Cooperatives

Although member cooperatives are independent business organizations, federated cooperatives are in a unique position to provide assistance and

leadership to their members through example and services. Each year, federated cooperatives and their members face similar financial decisions, including distribution of net savings and equity redemption. These cooperatives' decisions are reflected directly or indirectly in their members' decisions. If, for example, a federated cooperative establishes an equity redemption participation plan, members' directors must decide whether to join the plan. Also, federated cooperatives with a systematic equity redemption plan, such as a revolving fund, set an example for their members to consider.

Cooperative observers agree that federated cooperatives strongly influence their members' equity redemption programs. Federated cooperatives that pay a large percentage of their patronage refunds in cash provide their members with funds but do not always provide them an example of equity redemption to follow. On the other hand, federated cooperatives with an active equity redemption plan provide their members with both the funds and an example.

Services Provided Members

Federated cooperatives can supplement the traditional services of director training, management recruitment, accounting, and data processing by recommending equity redemption programs to their member cooperatives. Indiana Farm Bureau Cooperative Association (IFBCA) is an example of the strong leadership that can be provided through member services. IFBCA has tailored a base capital plan that sets up a flexible, equitable redemption and cash refund program for its members. This plan and the services IFBCA provides its members are described in appendix B.

This program could be adopted easily by its member cooperatives, because the federated cooperative had developed bylaw changes, reviewed the plan with the Internal Revenue Service, and established planning and accounting procedures. IFBCA provides information booklets and personnel to help directors and members of local cooperatives establish the plan.

The plan was designed with flexibility to accommodate each cooperative's unique situation. Still, local directors must face first the difficult decisions of establishing capital budgets and deciding on the amount of equity to be redeemed. After the aggregate amounts are decided, IFBCA can give the board pro forma financial statements for different levels of redemption and cash refunds. Once these levels are established, IFBCA prepares the checks for all members and a statement regarding the status of their equity, patronage, and sources of cash payment.

Interregional Cooperatives

Federated cooperatives have joined together to form another level of cooperatives, often called interregional cooperatives, that manufacture fertilizer, export grain, and refine petroleum, for example. Interregionals usually have few but very large members and are engaged in capital-

intensive operations. Because of the number and type of members, inter-regionals are able to design their equity financing arrangements to fit their members' needs.

CF Industries is a large fertilizer manufacturing interregional cooperative with 18 members. Fertilizer manufacture is capital intensive, and margins earned and amount of assets employed can vary greatly among individual fertilizer products. CF has developed a sophisticated base capital financing plan that relates each member's equity contribution to the assets employed and patronage for each fertilizer. (See case study in Appendix B.)

Lending Agencies

Creditors often play a significant role in setting conditions for equity redemption limits, because retirement programs reduce the cash available for loan repayments and, therefore, may hinder debt servicing capacity or future borrowing ability. As a result, creditors have a vested interest in equity redemption programs and policies.

Debt financing has become increasingly important to cooperatives. At the close of 1962, only 59 percent of all U.S. farmer cooperatives carried borrowed funds on their balance sheets. By 1976, this percentage had risen to 79. Debt financed 58 percent of total assets in 1976. Creditors report that the rate of increase in debt financing has accelerated since 1976.

In 1976, more than 60 percent of cooperatives' borrowed capital came from Banks for Cooperatives (BCs). About 20 percent of all cooperatives had loans from commercial banks, representing about 10 percent of their borrowed funds. The balance came from debt securities (18.9 percent), leases and industrial revenue bonds (3.6 percent), other cooperatives (1.9 percent), and other sources (3.9 percent)².

Cooperatives must develop their redemption programs in light of their creditors' policies. BCs pursue a variety of policies regarding their clients' equity redemption practices. They all, however, are more restrictive toward cooperatives in relatively weak financial positions. Three BCs require prior bank approval on all redemption, and four generally require it when redemption goes beyond a prescribed amount. Five BCs require prior approval only if redemption would violate loan covenants. These covenants are previously established dollar amounts and/or ratios used to monitor financial measurements such as working capital or leverage. A few BCs permit redemption of estates (because they're normally given priority) and small amounts for other purposes without prior approval to reduce paperwork. A few BCs are beginning to give their members greater flexibility in loan covenants regarding redemption practices. Over half of the BCs would make loans to facilitate redemption. Only three look with disfavor on such loans.

One of the few policies on which creditors agree unanimously is that

loan officers should not dictate or even strongly endorse one method of returning cash to members over another, for example, equity redemption, dividends on equity, or cash patronage refunds. The BCs feel that although generally they encourage equity redemption, their loan policies psychologically discourage it.

Loan covenants and moral suasion, in that order, are used to influence redemption. The BCs' basic philosophy is that "... boards ought to keep equity in the hands of active members." However, as one loan officer put it "...if profits are good and there is a strong equity position, we may suggest redemption; if the cooperative is weak...we discourage redemption."

A few large commercial banks have developed expertise in working with cooperatives and understand their unique features. Because most commercial bank loans to cooperatives are seasonal, they are not as concerned about redemption as the BCs. One commercial bank we consulted looks more to ability to generate funds to liquidate seasonal loans than ability to generate net savings and maintain a strong balance sheet. However, if financial condition and/or earnings prospects are relatively weak, they look carefully at equity position. "Can we get our money back?" is the important consideration.

One banker expressed a common attitude by saying "We don't discriminate either for or against cooperatives. In general, we don't care who or where a dealer or cooperative is, as long as it meets our (performance) criteria...Ongoing results are the primary consideration. We shift our business in a given area depending on results."³ Commercial banks that were consulted did not care about redemption as long as it did not jeopardize the repayment of their loan.

The BCs have and will continue to encourage the principle of each member providing equity financing of cooperatives "according to current use." They do this, for example, in their annual meetings and by cosponsoring programs with the Extension Service and State councils.

BCs are themselves cooperatives with a good equity redemption record. Most of them recently have adopted, or are in the process of converting to, base capital plans in which equities are directly linked to patronage or loans outstanding. Other BCs have maintained relatively short revolving periods. Their borrowers gain experience with systematic equity redemption plans through contact with these banks.

Mandatory Programs

A few States require redemption of an individual member's equity under certain circumstances, such as death, ineligibility, expulsion, or withdrawal. However, no Federal or State statute currently establishes a mandatory revolving period or retirement date for equities. Likewise, no statute requires payment of interest or dividends on any class of patron equity. Legislative enactment of either of the GAO proposals for equity

redemption and payment of interest or dividends would bring big changes. See chapter VI for discussion of GAO proposals.

Equity Redemption

Mandatory equity redemption would ensure more timely retirement of equity, benefiting former patrons and overinvested current patrons. In many cases, mandatory equity redemption might produce more equitable treatment of patrons and increase patronage of cooperatives.⁴

However, a mandatory program could significantly restrict a cooperatives' flexibility to determine growth, capital expenditures, and distribution of cash benefits among patrons. In some cases, if indiscriminantly applied, mandatory redemption of equity could affect adversely the cooperative's cash flow, creating financial hardships, and forcing bankruptcy.

Although many cooperatives might be able to continue meeting debt repayment, mandatory equity redemption could significantly diminish cash available for growth. Thus, new cooperatives could be prevented from making capital improvements necessary for serving patrons. Even among established cooperatives, mandatory equity redemption might decrease funds available for replacing assets and meeting inflation. Failure to replace adequately or supplement assets would gradually erode the financial structure of a cooperative and jeopardize its ability to serve patrons.

Besides causing financial difficulties, mandatory equity redemption could significantly alter the concept of equity capital in cooperatives. Traditionally, equity has served as risk capital. It provides the necessary element of ownership and control that all business enterprises need. It also serves as the basis for credit and a buffer for creditors should the business suffer operating losses or a shrinkage in assets.

Without mandatory redemption of equity, a cooperative that encounters a series of difficult years can slow down temporarily equity retirement until it regains its financial strength. However, under mandatory equity redemption, the cooperative would be obligated to retire equity in a manner similar to debt, diminishing its capacity to absorb the uncertainties of the business environment. In fact, any revolving credits or other investments with mandatory retirement dates would have to be classified as liabilities. Concern among lenders who might view the commitment to servicing equity as a threat to the cooperatives' ability to service debt could restrict the availability of credit.

Payment of Interest or Dividends

Mandatory payment of interest or dividends on retained equities would benefit inactive patrons and the heirs of deceased patrons by compensating them for use of their money. As with mandatory equity redemption, mandatory payment of interest or dividends on retained equities also could increase patronage. In addition, according to the GAO, mandatory

payment of interest or dividends would provide an economic incentive for cooperatives to retire equities on a more timely basis.⁵

It is likely, however, that mandatory payment of interest or dividends would actually impair a cooperative's ability to retire equity, because it would reduce cash flow. In addition, mandatory payment of interest or dividends on retained equity would have several of the same impacts as mandatory equity redemption. It would restrict the ability of cooperatives to determine the distribution of cash benefits among patrons. If indiscriminantly applied, it could affect adversely the cash flow, creating financial hardships and bankruptcies for some cooperatives while diminishing funds available for asset replacement, growth, and meeting inflation for others. It might also diminish the capacity of equity to serve as a buffer against operating losses and shrinking asset values and threaten the cooperatives' ability to service debt.

Moreover, paying higher interest or dividends on retained equity could be interpreted by some as conflicting with fundamental principles of cooperation. Two of the generally accepted principles upon which agricultural cooperation is based are "operation at cost" and "limited returns on equity capital." In practice, this has meant that cooperatives have traditionally paid low or no dividends on equity, particularly equity from retained patronage refunds and per-unit capital retains. Patrons as owners have been expected to supply equity through these sources.

By not paying dividends on equity raised this way, cooperatives have been able to distribute most of their net savings to patrons in proportion to patronage. In fiscal year 1976, cooperatives averaged paying only 2.2 percent of before-tax net savings as dividends on equity capital. This allowed them to pay 84.8 percent in patronage refunds. Mandatory payment of interest or dividends on retained equity would represent a significant shift from distributing net savings on the basis of patronage to distributing them on the basis of capital, a position inconsistent with basic cooperative philosophy.

Financial Impacts

According to research based on ACS financial profile studies for fiscal years 1970 and 1976,⁶ the average cooperative could maintain a revolving fund with a 27.2-year period, while paying 49 percent of patronage refunds in cash and increasing retained equity by 13.9 percent each year. If a mandatory program of equity redemption were enacted, the average cooperative could meet the requirements of a 15-year revolving period by lowering cash patronage refunds to 40.8 percent or by lowering its rate of growth to 11.6 percent. To maintain a 10-year revolving period, the cooperative would have to reduce cash patronage refunds to 28.1 percent or growth to 7.2 percent. The cooperative would not be able to maintain a mandatory 5-year revolving period and still pay the 20-percent minimum level of cash patronage refunds without reducing its rate of growth to 1.6 percent.

Again, these results are for the average cooperative during specific years. Business performance, of course, varies by cooperative and by year. Some cooperatives would be able to meet the mandatory requirements with ease, while others would have substantial difficulties.

With a continuation of past growth in assets and no further increase in leverage, cooperatives would have held an estimated \$11.3 billion in allocated equity acquired by retained patronage refunds and per-unit capital retains at the end of fiscal year 1981. If a mandatory provision requiring cooperatives to pay, for example, 8 percent interest on retained equity were enacted, the interest cost to cooperatives could increase by as much as \$900 million per year. This would reduce their available net savings by 30 percent.

Longer revolving periods, lower levels of cash patronage refunds, or lower rates of growth in retained equity would have to accompany the reduction in available net savings. To meet the increased interest cost without lengthening its revolving period, the average cooperative would have to lower cash patronage refunds from 49 percent to 21.5 percent or lower its annual rate of growth from 13.9 percent to 9.4 percent.

If both equity redemption and payment of interest or dividends on retained equity were mandated, the average cooperative would have to reduce its rate of growth to 6 percent or lower cash patronage refunds to maintain a 15-year revolving period. To maintain a 10-year period, the cooperative would have to reduce its rate of growth to .5 percent or lower cash patronage refunds. During periods of inflation, cooperatives would have to maintain substantially higher rates of growth to avoid deterioration of their capital structures.

An alternative to mandatory payment of interest or dividends on all retained equities would be to require payment of interest or dividends on only those equities held by inactive patrons or heirs of deceased patrons. This approach would reduce significantly the cooperative's financial burden. Yet inactive patrons and estates would be compensated for holding equity. This also would focus attention within cooperatives on the importance of returning the equities of inactive patrons and encourage cooperatives to do so.

According to a 1974 ACS study, 22 percent of the allocated equity of centralized cooperatives surveyed was held by inactive equityholders.⁷ If the average cooperative had to pay 8 percent interest on 22 percent of retained equities, it would only have to lower its cash patronage refunds from 49 percent to 44.8 percent instead of 21.5 percent, or reduce its annual rate of growth from 13.9 percent to 13 percent instead of 9.4 percent.

To maintain a mandatory 15-year revolving period, the average cooperative would have only to reduce its rate of growth to 10.4 percent instead of 6 percent. A 10-year revolving period would require decreasing the rate of growth to only 5.8 percent instead of .5 percent.

Some cooperatives might be able to meet the requirements of mandatory programs by accumulating additional capital from patrons through direct investments, increased retained patronage refunds, or per-unit capital retains. Others with good solvency positions and unused borrowing capacity could substitute debt for redeemed equity. However, despite the best intentions of membership and management, some cooperatives may not be able to generate enough cash flow to replace redeemed equity. Unless exceptions to mandatory restrictions could be made, financial failures might result.

The threat that mandatory programs of equity redemption and payment of interest or dividends might push weak cooperatives into financial failure weighs heavily against such programs. If enacted, mandatory programs should be balanced between the need of each cooperative to plan and implement a systematic equity redemption program and its need for capital to finance operations and growth.

Exceptions to mandatory programs could be made for financially weak cooperatives, but defining and enforcing rules for determining exceptions might be difficult.

Even cooperatives that could meet mandatory restrictions might suffer, because cash used to redeem equity would be diverted from replacing assets, growth, and meeting inflation. If cooperatives are to maintain flexibility in managing their financial affairs, they will need to adopt more effective systems for redeeming equity.

FOOTNOTES

¹ Griffin and others, pp. 22, 42.

² Griffin and others, pp. 67-68.

³ Hanrahan, p. 9.

⁴ U.S. General Accounting Office, pp. 63-64.

⁵ U.S. General Accounting Office, p. 43.

⁶ Griffin and others.

⁷ Brown and Volkin, p. 21.

VIII. PROCEDURES FOR DEVELOPING REDEMPTION PROGRAMS¹

Developing or even modifying an equity redemption program can be intimidating. However, a systematic procedure will organize the process. The procedures presented here are comprehensive and relatively detailed, perhaps too detailed for most local cooperatives. They are intended to help create simplified procedures adapted to the needs of local cooperatives in a particular area.

While there is no perfect sequence to be followed, certain issues are common to most situations. These have been worked into the recommended procedures that are given as a general pattern and will have to be modified to fit each cooperative. Some steps may be unnecessary or too comprehensive for cooperatives that are changing existing programs or that have already made decisions on some aspects. On the other hand, a federated cooperative preparing a model program for its members will require a comprehensive development and evaluation procedure.

The procedure has been divided into five basic steps:

1. Organization of a committee,
2. Evaluation of current situation,
3. Initial screening and development of programs,
4. Final evaluation and selection of program, and
5. Implementation.

The board of directors appoints the committee, giving it general guidelines. The board receives interim reports and acts on the final recommendation. Many of the details described in these procedures can be carried out by employees of the cooperative.

Step 1. Organizing a Committee

Once a board of directors has decided to develop an equity redemption program or to evaluate an existing one, the first step is to create an ad hoc committee. The committee should be given a timetable and specific objectives, including examination of the situation as perceived by the board and making specific recommendations to the board.

Balance and expertise are important criteria to be used in selecting committee members. The board, management, and interested and qualified members who represent the different classes of members, would provide the balance. Outside organizations such as an affiliated cooperative also may provide a committee member with needed expertise. Larger cooperatives may be able to afford and have ready access to legal and financial specialists.

The committee should be instructed to seek assistance, as the need arises, from the following agencies:

1. Federated cooperatives with which it is affiliated;
2. Its Bank for Cooperatives;
3. Its State cooperative council;
4. Its State cooperative Extension service;
5. Agricultural Cooperative Service, USDA; and
6. Other cooperatives that have dealt with similar problems. (Names may be obtained from the preceding organizations.)

These organizations' ability to assist will vary. Some State cooperative extension services do not have the resources to provide a cooperative specialist, while others have specialists intimately familiar with and anxious to assist cooperatives. They may also have literature adapted to local circumstances. Normally, the committee also will require the services of an attorney and auditor or other financial consultant.

Step 2. Evaluating the Current Situation

Part A. Information to be used in the evaluation and development process should be assembled. This includes:

1. Articles of incorporation and bylaws;
2. State statutes relating to equity redemption, if applicable;
3. Loan agreements;
4. Balance sheet and operating statements for the past 5 years, including reconciliation of net worth section with net savings and other sources with cash payouts;
5. Schedule of cash paid for equity redemption, dividends on equity, and cash refunds;
6. Patronage and equity ledger on each member;
7. Names and equity held by different classes of inactive members (estates, moved, retired, shifted patronage, or resigned membership);
8. Number of new members and number of members becoming inactive for a recent period (for example, 5 years);
9. Correspondence and other information on the feelings of members toward various aspects of equity redemption;

10. Long-term financial plans including major capital investments and anticipated real and monetary growth;

11. A statement from the board on the primary purpose of the cooperative, including organizational structure and relationships with federations, commodities handled or services rendered, geographic area served, and other information to establish the present and future scope of the cooperative's activities; and

12. Information on alternative redemption programs, including those described in this handbook and those recommended by the Bank for Cooperatives or by any closely related federated cooperative.

Part B. The following summaries should then be prepared:

1. Source and use of funds similar to that in table 8-1.
2. Equity profile:
 - a. Allocated equity by year of allocation;
 - b. Allocated equity by age of member;
 - c. Equity held by currently inactive member (estates, moved, retired, shifted patronage); and
 - d. Patronage-member equity profile (table 8-2).
3. Salient equity redemption features of:
 - a. State cooperative statutes (See chapter VI.);
 - b. Articles of incorporation; and
 - c. Bylaws (including discretion given the board and any redemption programs specified).

This information will be used to determine if bylaws need changing and to make sure that the program developed will not violate State law.

4. Complaints, feelings, and attitudes of members toward important factors, for example, dividends, cash refunds, various forms of equity redemption and acquisition.

5. Characteristics of members:

- a. Size distribution (using such measures as patronage, acres, or approximate gross sales);
- b. Mobility (frequency distribution on number of years members are active, average turnover in membership, average number of new members, and exit of members per year); and

Table 8-1—Cash flow to evaluate equity redemption program

Item	Fiscal year				
	1971	1978	1979	1980	1981
Source of funds					
Savings					
Local					
Federated					
Per-unit capital retains					
Direct investments					
Borrowing					
Other ¹					
Total sources					
Use of funds					
Cash patronage refunds					
Dividends					
Equity redemption					
Loan payments					
Facility additions					
Other ¹					
Total uses					
Change					

¹ May be changes in any other balance sheet account.

c. Trend in total membership.

Part C. The current situation should be analyzed:

1. Equity capital necessary to sustain planned future operation.

2. Sources of funds:

a. What are they, their trends, have they kept up with inflation, and what is their likely future level?

b. Is there a potential source not now being used, for example, per-unit capital retains or direct investment? Could current sources be supplemented?

c. What is the potential for increasing net savings, for example, change in pricing policy, increase in operational efficiency? (See last section of this chapter.)

3. Uses of funds (table 8-1):

a. Trends in each use.

b. Have major investments worked out as planned? Was return on investment sufficient to justify expenditure?

c. What are member pressures for each use?

d. Could some uses be reduced by adopting other programs to satisfy these needs?

4. The composition and trend in equity (preferred stock, voting or common stock, equity certificates, and unallocated equity):

a. Has net worth been expanding at a rate to support increased demands brought about by inflation and increased services needed by members?

b. Identify trends in key financial ratios such as net worth to total assets, debt to equity, percentages of working capital and net savings applied to redemption.

c. Should net worth represent a higher proportion of total assets—or could it be lower?

5. Current redemption program.

a. Percentage of equity held by inactive members and trend;

b. Percentage of active members who are over- and underinvested and

trend (See IFBCA case study in appendix B and section of chapter III on measuring program performance.);

c. Percentage of funds used for redemption in relation to net savings and allocated equity and trend;

d. Performance of current redemption program (trends and status of, for example, length of revolving fund, extent that members are over- or underinvested if a base capital plan is used, or extent that inactive members' equity has been redeemed, if a special plan is used); and

e. Other strengths and weaknesses, for example, has the program been fair to both current and inactive members and has it maintained ownership in the hands of current patrons in proportion to patronage?

Part D. Revise problem statement.

A written statement that pinpoints the problems and their symptoms can be made after completing the Part C analysis. In some cases, it may simply be the lack of a formalized plan. In others, there may be complex interdependent relationships between various sources and uses. If this problem statement is carefully, realistically, and accurately drawn up, considerable time and effort can be saved in the rest of the development process.

Step 3. Screening and Developing Programs

If the evaluation from step 2 indicates that change is needed, the equity redemption committee should select the best two or three plans from those plans available, including modifications created by the committee, for further detailed analysis in step 4. It will be necessary to have specific details of these programs and sources and uses of funds. Programs should always be screened and developed in light of the key characteristics of the cooperative (size, type, equity required) and its members (mobility, age, and numbers).

Part A. The first step is to eliminate programs that are clearly unworkable or undesirable. Then the programs that would best meet the needs of the members and the cooperative can be selected. Modifications that committee members feel would improve each program should be incorporated.

Screening can be done in several ways. One is to subjectively rank them on the basis of the criteria established by the board. (See chapter III for guidance.) Several more complex and involved screening methods could be used. For example (table 8-3), a numeric weight could be assigned to each criterion indicating its relative importance to the specific situation. The weights assigned could range from 1 (unimportant) to 10 (very important). For example, "easy to understand by members" may receive a 2 by a cooperative with a few large and stable members but an 8 or 9 by a cooperative with a large and mobile membership.

Table 8-3—Ranking procedure to facilitate initial screening of equity redemption programs

Criteria ¹	Program ²							
	Criteria weight		Revolving fund		Base capital plan		Percentage-of-all -equities	
	Rank	Weight	Rank	Weight	Rank	Weight	Rank	Weight
Column number	1	2	3	4	5	6	7	8
1. Capital								
2. Equitable investment								
3. Flexibility								
4. Board control								
5. Legal								
6. Easy to administer								
7. Member understanding								
8. Other								
Total								

¹ Criteria numbers correspond to those in the introduction of Chapter III.

Procedure:

1. Weight each criterion according to its relative importance to the specific situation, 0 to 10; 0 = not important, 10 = very important.
2. Rank each program 1 to n where n = number of programs being considered or maximum value 4, in this case, and 1 = minimum value. Place these values in even numbered columns (Rank).
3. Place the product of the value in column 1 and rank column in the "weight" column. Total the values in the "weight" or even numbered columns to obtain weighted value for each program.

The second step would be to rank each program (1 = worst, n = best, where n = number of program being considered) on how well they met each criteria. Then the rank is multiplied by the numeric weight of the corresponding criteria. The sum of these products for each program would provide a relatively objective measure to select the programs for further consideration.

A major benefit of this process would be that committee members would become familiar with each program and the relative importance of all aspects of equity redemption and its relationship to their cooperative. Regardless of how it is done, the number of programs to be considered must be narrowed down to two or three before proceeding.

Part B. Specific features need to be incorporated into the programs selected to meet the criteria in chapter III. It would also be advisable to add options that may be important to members. These options, such as nonqualified refunds, market for allocated equities, and redemption at a discount for early redemption, could greatly enhance membership in the cooperative by allowing members to tailor the flow of funds to their situations.

Members are becoming increasingly sophisticated. Many have or will have personal computers that allow them to readily determine which options would be to their advantage. In some cases, disadvantages in the form of member confusion and administrative problems would not make such options advisable.

Every program should include common features such as provisions for periodic evaluation, so the board and management are aware of problems in advance and have the flexibility to accommodate business reverses. However, each plan has unique features that may require special adaptations. For example, a base capital plan must have a method for redeeming the equities of overinvested members. Also, a special plan may have to establish priorities for redeeming equities of inactive members.

Part C. At this point, the committee should make specific plans and recommendations to augment cash flow for redemption.

1. Sources. A limited number of options for increasing cash flow should be selected for further evaluation. These include the current method as well as additional plans. Per-unit capital retains or direct investment should be considered seriously if not now used.

2. Uses:

- a. If dividends on allocated equity are being paid, should they be eliminated?

- b. If percentages of cash patronage refunds are greater than the cooperative's average tax rate, could nonqualified refunds be used?

c. What are the specific assumptions on inflation and the increased equity required to meet it?

d. Can planned expansions in services and growth pass stringent return-on-investment tests so that returns will be ample to service the equity required to support the growth? In some cases, it may be to the members' advantage to let private companies provide the service rather than tie up members' cash in activities yielding low returns.

Step 4. Evaluating and Selecting a Program

This step estimates the financial impact of proposed programs on the cooperative and different classes of members. After evaluating these impacts, the committee can decide which program to propose to the board.

Part A. Complete a long-range financial plan (5 to 10 years) by extending the information gathered for table 8-1 into the future. Several likely scenarios, each with different combinations or assumptions on inflation, level of net savings, and growth should be included in the analysis.

Part B. Calculate the financial impact of each program on the cooperative and different classes of members (active, inactive, new, etc.) using the material prepared in part A. This can be done in several ways:

1. A relatively straightforward yet powerful approach is to match the scenarios selected in part A with the values in the financial impact tables in chapter V. These tables can save considerable time in evaluating the trade-offs of different levels of growth, redemption, dividend rates, and cash refunds. Equations in appendix D can be used to calculate values not given in the tables in chapter V. Impact on different classes of members would then have to be budgeted out.

2. A second approach is by budgeting through the various scenarios. This can be a laborious, time-consuming task unless computer facilities and programs are available. At this time, not many models adapted to cooperatives are available. The Omaha Bank for Cooperatives, Indiana Farm Bureau Cooperative Association, and AGNET² have such programs but their availability is limited. Others may be available. Check with organizations listed under step 1 for other more accessible programs. These programs can, at minimal cost, be used to work through the impact of different policies and operating assumptions.

Part C. Select equity redemption program for recommendation.

The committee should be in a position to make its recommendation to the board after evaluating the financial impacts. In making this decision, the committee should consider several factors:

1. How does the program match the criteria rankings prepared in step 3?

2. What is the financial impact on the cooperative in times of stress as well as prosperity?
3. What will the impact be on different classes of members? Select the program that maximizes benefits to members on a fair and equitable basis. How does the program affect inactive, new, established, and even prospective members?
4. How will creditors respond?
5. How does the program correspond with the redemption programs of federated cooperatives to which the cooperative belongs?

Part D. Present the plan to the board of directors for their action.

Step 5. Implementation

The following points should be considered once the plan has been approved by the board of directors.

Part A. Consult with an attorney and financial advisor as the following steps are taken:

1. Prepare proposed changes in bylaws, if necessary;
2. Obtain IRS ruling, if necessary; and
3. Consult with creditors and other interested parties such as federated cooperatives to which the cooperative belongs.

Part B. Educating employees and members can be the most critical step in adopting a new equity redemption program. Lack of understanding on their part can be a major barrier to successfully implementing an otherwise ideal plan. Any change such as that contemplated in a new equity redemption program provides a unique opportunity to increase members' participation, interest, and understanding of the cooperative. A wide variety of education and participation methods should be used because of the complementary relationships that develop when several approaches are used.

1. Develop brochures and other educational materials that describe and explain the policies, details, and procedures of the program. Illustrate how it will affect the members. If the brochure is properly drawn up, it can guide management in implementing the program and help members and legal representatives with such actions as settling estates.
2. Train employees who will be working with the plan and those who come in contact with members. They often are the most important channel of information to and from members.

3. Schedule special orientation meetings with members. In addition to conducting general sessions, meet with special interest groups such as young couples, large- or small-volume members, and/or those in different geographic districts.

The experiences of Indiana Farm Bureau Cooperative Association attest to the crucial importance of member education in adopting an equity redemption plan. IFBCA, a federated association, has developed a voluntary redemption program for its 71 member cooperatives (appendix B). Thus far, about 35 of the 71 have adopted it. As part of its educational program, IFBCA provides professional staff and visual and written materials. Computer printouts show the impact of different options on the cooperative and its members.

Because IFBCA's redemption plan embodies the base capital concept and includes several options, it appears complex at first. As one local cooperative manager whose association adopted the plan indicated, "This program could have been confusing to the board and frustrating to members. However, this didn't happen because of a thorough and unhurried education program." The manager further emphasized, "Members are more willing to finance the association if they understand the principles of cooperative finance and the redemption program of their organization. Full disclosure of plans, sources and uses of funds, equity redemption, and taxes is essential." The local cooperative used several key educational elements in preparing members to vote on adopting the redemption program:

1. Special meetings were held with specific groups, for example, large-volume members, young patrons, and the most innovative. The cooperative relied on these members to spread the word.
2. One-page summaries of the redemption program accompanied invitations to meetings to discuss the topic.
3. The redemption program was presented briefly and concisely at meetings. Management discovered that a 3- to 5-minute presentation was most effective, leaving ample time for questions and answers.
4. Overhead projections and brochures were used liberally at meetings.
5. Directors were patient in discussing the program with members, being careful not to rush or push approval.
6. Data for answering members' questions on how the program would affect them was made readily available.
7. The board, influential members, management, and employees in contact with members were thoroughly educated about the program.
8. News releases were prepared and distributed.

In describing how they educate members about redemption, James E. Mueller, chief financial officer of Dairymen, Inc., a large dairy cooperative with about 5,000 producers, says, "Our equity program is strong, because we sell it to our members." Twice a year, the May and December issues of *Dairymen News*, the cooperative's monthly magazine for members, has articles explaining equity acquisition and redemption and how these two facets of the equity program are linked. Field representatives use these articles, too, when visiting members and to explain the program at producers' meetings. At annual meetings, special sessions are scheduled for discussing member investments and equity redemption. "It's something that's good to talk about," Mueller affirms. "As a result, members understand and support the program."

Part C. Obtain members' approval of the plan and associated bylaw changes at an annual or special meeting. This meeting should not be held until all members have had ample opportunity to thoroughly understand the program.

Part D. After approval by members, the responsibility to carry out the details of the program and to provide feedback to the board and members should be turned over to management. Details of the program should be fully covered in the cooperative's annual report. Details regarding individual members should be reported on a document such as the refund check stub.

Summary of Actions to Improve Equity Redemption

A cooperative that is not meeting its objectives for cash patronage refunds, equity redemption, and growth may be able to make improvements. The possibilities of using nonqualified allocations and per-unit capital retains already have been discussed. In most instances, the following actions may also help:

1. Increasing efficiency by better managing inventory, improving expense control, or increasing productivity.
2. Increasing margins by charging higher prices for supplies and services and paying lower prices for commodities marketed. In exchange, patrons would receive improved equity redemption. For many cooperatives, competition may prohibit this approach.
3. Discontinuing the payment of dividends on revolving forms of patron equity. As a consequence of receiving dividends, equityholders must wait longer for their equity to be redeemed.
4. Selecting only those investments that will increase the amount of funds available for cash patronage refunds, equity redemption, and growth. In some cases, the cooperative may choose to liquidate investments not meeting this criterion.

5. Increasing leverage. If the cooperative is in a good financial position and has unused borrowing capacity, it can increase its rate of return to allocated equity by substituting debt for allocated equity, as long as the cost of borrowed capital is less than the rate of return.

6. Increasing the proportion of equity supplied by purchased equity such as nonpatronage preferred stock. The limited dividends on capital stock may make it difficult to sell, however. It also may create its own involvement problems.

7. Increasing, within limits, the proportion of equity supplied by unallocated reserves. Except for cooperatives with high tax and growth rates and low rates of return to allocated equity, this will increase the rate of return. There may be other advantages of increasing unallocated reserves. However, as the share of net savings added to unallocated reserves increases, fewer funds will be available for distribution to patrons. Relying too much on unallocated reserves also may violate the cooperative principle of service at cost and weaken member ownership and control.

8. Reevaluating Federal income tax status. Cooperatives that pay dividends on capital stock and have substantial nonpatronage income may benefit from treatment under section 521 of the Internal Revenue Code (so-called "exempt" status). Nonpatronage income is derived from sources not directly related to the marketing, purchasing, or service activities of the cooperative, such as from the lease of premises, from investments in securities, or from the sale or exchange of capital assets. Treatment under section 521 allows cooperatives to deduct dividends paid on capital stock and nonpatronage income distributed to patrons on a patronage basis. However, to receive such treatment, cooperatives must handle member and nonmember patrons alike. Cooperatives that have substantial nonmember business but wish to pay patronage refunds to members only may benefit from "nonexempt" status.

FOOTNOTES

¹ Other references on this topic are Cook (18); and O'Connor.

² A computer time-sharing system with several programs designed for agricultural applications. It is directly available in Montana, Nebraska, North Dakota, South Dakota, Washington, and Wyoming through each State's Cooperative Extension Service. Interested individuals in other States should write or call Agnet Center, 105 Miller Hall, University of Nebraska, Lincoln, Nebr. 68503. Also see Turner and May.

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APPENDIX A: GLOSSARY

Base capital plan: A plan for providing equity where each member's capital obligation is determined each year by the member's share of total patronage for a base period. Underinvested patrons build equities and overinvested patrons' equities are redeemed in several ways.

Cash patronage refund: Distributions of patronage refunds paid to patrons in cash.

Dividends: A distribution of net savings or accumulated earnings usually paid according to invested capital.

Equitable financing: A situation where patrons of a cooperative provide equity in proportion to their patronage.

Equity or net worth: Ownership or risk capital in the cooperative generally arising from direct investment, retained patronage refunds, per-unit capital retains, and nonmember business. Total assets less total liabilities. Ownership claims may be in the form of stock, membership certificates, some type of book, capital, or equity credits, and may include unallocated reserves.

Equity redemption: The payment in cash or other property for previously issued equities.

Investment tax credit: Credit earned by a business which can be applied as payment toward Federal income tax and which is based on investments made during the year in eligible property to be used by the business.

Needed equity: The net worth required by a cooperative to sustain its operation for a specified period, such as the coming year, as determined by the board.

Net savings: Gross income from all sources minus all allowable expenses. Same as net margins, net earnings, and net income.

Nonsection 521 cooperative: A cooperative that does not qualify for exemption under Section 521 and therefore must take all income except qualified allocations into account for computing Federal income taxes.

Nonqualified allocation: A noncash patronage refund or per-unit capital retain allocation, which is not deducted from the taxable income of the cooperative. When a nonqualified allocation is later redeemed in cash, the cooperative deducts the allocation from its taxable income, and the patron recognizes the amount, with minor exceptions, as ordinary income.

Overinvested: The condition of patrons who have more than their share of equity, based on patronage, invested in a cooperative.

Patronage refund: Net savings of a cooperative allocated to a patron in proportion to the value or quantity of the individual's patronage, whether distributed in cash or left in the cooperative. Refunds left in the cooperative may be in qualified or nonqualified form. Also known as patronage dividends.

Per-unit capital retain: Equity invested in a cooperative by a patron based on the value or quantity of products marketed or purchased for the patron and withheld from the proceeds of products marketed or added to purchase price.

Percent-of-all-equities plan: A system of redeeming equity where a percentage of allocated equity, regardless of year of issue, is redeemed.

Qualified allocation: A patronage refund or per-unit capital retain allocation that the cooperative can exclude from its taxable income and that the patron agrees to have taxed as if received in cash. At least 20 percent of a qualified patronage refund allocation must be paid in cash.

Rate of return to allocated equity: Net savings available for allocation as patronage refunds, after deducting dividends on equity, additions to unallocated reserves, and income taxes arising from these distributions, expressed as a percentage of allocated equity.

Rate of deduction of per-unit capital retains: Current per-unit capital retain deductions expressed as a percentage of allocated equity.

Retained patronage refunds: Noncash allocations of net savings disclosed to patrons in written notices of allocation. These allocations usually redeemed in cash at a later date. Also known as deferred or noncash patronage refunds.

Revolving fund plan: A system of redeeming equity where the earliest investments of members are redeemed first. Equities may originate from retained patronage refunds, per-unit capital retains, and cash investments.

Section 521 cooperative: A cooperative that meets certain requirements and has received approval for exemption from the payment of income tax on dividends paid on capital stock and nonpatronage income distributed to patrons on a patronage basis under section 521 of the Internal Revenue Code.

Special plan: A system of redeeming equity where no redemption is made until a specific event, such as death, triggers redemption of all allocated equities.

Subchapter T: The portion of the Internal Revenue Code (Sections 1381-1388) that covers the tax principles applying to any business operating on a cooperative basis.

Unallocated reserves: Equity not allocated to individual persons. Sources include net savings retained but not allocated, unclaimed checks, and appraisal surplus. Also known as tax-paid surplus, reserves for losses, and retained earnings.

Underinvested: The condition of patrons who have less than their share of equity invested in the cooperative, based on patronage.

Written notice of allocation: A written notice from a cooperative that discloses the stated dollar amount allocated and the portion constituting patron refund and/or per-unit capital retains to the patron. A written notice of allocation may be qualified or nonqualified.

APPENDIX B: CASE STUDIES

Dairymen, Inc., Multiple Revolving Fund Plan

Dairymen, Inc. (DI), was formed in 1968 by consolidating 8 dairy cooperatives with 6,000 producers. DI's sales have climbed from \$184 million in 1969 to \$785 million in 1979—a fourfold increase. The cooperative's assets expanded even more rapidly, from \$30 million in 1969 to \$175 million in 1979—about sixfold. DI's payments to members for milk deliveries equaled \$594 million in 1979 and averaged \$93,288 per farm. These payments to dairy farmers (milk checks plus patronage refunds) accounted for 97.4 cents of every \$1 of raw milk sales.

A major factor in DI's growth has been its equity redemption program, which its management has emphasized from the beginning. The cooperative's first annual report for its fiscal year ending in 1969 stated: "Your equity is being revolved to you on a 5-year basis, and the first checks have already been mailed. Revolving equity on a 5-year basis assures that current patrons finance the cooperative. This is as it should be, because the current patrons are the ones receiving the benefits of the organization and the ones who own and control its operations.

"We do not promise to give it back in 5 years," qualifies James E. Mueller, chief financial officer. "We tell our members that it is the present board's policy to revolve equity over that short a period. If the unexpected should happen—if our cash forecasting and corporate planning run into difficulty—DI can change the revolving period...we're not committed to a 5-year basis."

However, DI has stuck with this 5-year revolving period for all of its equity allocations to members since its inception—with one exception. Equities from predecessor or premerger cooperatives—which accounted for only 2 percent of the association's fiscal 1979 net worth—are rotated on a 5-, 7-, or 8-year period, depending on agreements reached when the mergers took place.

DI emphasizes to members how important an adequate equity capital base is in establishing a line of credit and enabling the cooperative to borrow funds on the most favorable terms. The cooperative's net worth has grown at a compound annual rate of 16 percent—from \$12 million in 1969 to \$54 million in 1979.

"It should be recognized that the foundation of our capital structure is members' investment," stresses Mueller. "We take our equity revolving program very seriously, because it keeps us financially sound. We're most conscious of producer attitudes in this area."

Members invest three ways in DI:

1. Per-unit capital retains.

2. Net margins retained from business done with or for members (patronage refunds).

3. Net margins retained from nonmember business.

The following tabulation shows the total amount of each type of investment DI allocated to members in May 1980, resulting from fiscal 1979 operations:

<i>Member Investment Allocated</i>	<i>Amount</i>
	<i>Thousand Dollars</i>
(1) Per-unit capital retains	5,118
(2) Patronage refunds	
Cash	1,223
Noncash	4,531
(3) Nonmember income (after taxes)	360
	<hr/>
Total	11,232

Except for nonmember income (equaling 3.2 percent of members' total fiscal 1979 investments of \$11.2 million), DI handles all other member investments as qualified allocations for tax purposes. The cooperative segregates nonmember income, pays corporate taxes on it, and allocates the balance to members based on the pounds of milk they marketed through the cooperative during the fiscal year.

The rest of DI's 1980 equity allocations (96.8 percent) were qualified and consisted of per-unit capital retains (45.6 percent) and patronage refunds from retained net margins (51.2 percent). Per-unit capital retains are deducted at the rate of 10 cents per hundredweight of milk that members market through the cooperative. This rate has not changed since the cooperative was formed.

DI's patronage dividends or refunds are generated from two major sources: (1) retained net margins resulting from DI's operations, and (2) margins generated through operations of Flav-O-Rich, DI's wholly owned bottling and fluid processing subsidiary. Allocated net margins from these two operations are recorded in separate revolving funds. Members are notified annually of the amount credited to their equity accounts from each source. Total patronage dividends allocated to members in May 1980 equaled about 12 cents per cwt. of milk they marketed through DI during fiscal 1979.

Multiple Revolving Funds Used

All of DI's equity is allocated. The cooperative maintains five revolving funds segregated on the basis of source of members' investment. Four

funds are on 5-year cycles (DI net margins, Flav-O-Rich net margins, per-unit capital retains, and nonpatronage income), and one fund (equities from predecessor cooperatives) will soon be depleted. The four 5-year cycle funds accounted for 98 percent of DI's fiscal 1979 net worth—and are active investment-redemption (inflow-outflow) funds, with three being replenished regularly with qualified patronage allocations and one (by far the smallest) with nonmember allocations.

The other major facet of DI's equity redemption program is what the cooperative calls its "early equity retirement program." Mueller described this program as one that "...recognizes the unusual needs of certain equityholders. It has two aspects: (1) Equity of deceased members is retired early to facilitate settlement of their estates, and (2) equity of inactive members experiencing hardships such as bankruptcy is eligible for early retirement when the member's division and corporate boards approve such action." In 1979, DI's retired \$10.4 million of equity that its members had invested in 1974, and the "early" program accounted for 4 percent of the total amount redeemed. The \$10.4 million of equity returned to members in cash represented one-fifth of the \$52.2 million of total funds the cooperative used in fiscal 1979. DI has redeemed members' equity every year since 1969.

Related to DI's equity redemption program (and helping support it) is "MERP," which the cooperative launched in fiscal 1979. Members appear to like the Member Equity Reinvestment Program, which converts equity to debt. Last year, members invested \$1.5 million in this voluntary program by reinvesting their equity eligible for cash redemption for a 3-year period at a guaranteed interest rate. This converted equity is included on the balance sheet as long-term debt. It is the only type of member investment in DI that earns interest.

Advantages of Programs

The primary advantage from management's viewpoint is that these programs provide adequate equity capital. The second most important advantage is that the cooperative's short revolving cycle (and early redemption in cases of hardship and death) maintain members' investment in proportion to patronage. This financing remains in the hands of active members, a third advantage. "With the 5-year cycle and early program," says Mueller, "only a nominal amount of equity is held by inactive members at any point in time, and we've never had any complaints."

DI's management believes their equity redemption program has strengthened producer loyalty and support of the cooperative's financing and marketing activities. "We keep our members informed. They understand our equity program and know when they invest in DI they're going to get their money back in a reasonable time."

An important facet of DI's program is educating its members about the cooperative principle of distributing benefits on the basis of patronage,

as well as telling them how their equity is being used and when it will be redeemed. The chief financial officer says, "Our equity program is strong, because we sell it to our members." The May and December issues of *Dairymen News*, the cooperative's monthly magazine for members, have articles explaining the equity program. Field representatives use these articles, too, when visiting members and at the producer meetings. At annual meetings, special sessions are scheduled for discussing member investments and equity redemption.

Importance of Capital Budgeting

When asked what procedures they would recommend other cooperatives follow in developing a successful redemption program, Mueller said, "The key procedures are capital budgeting and capital forecasting. First, determine your capital needs. Then, plan financing methods for meeting these goals. Finally, set aside capital required for equity redemption. We've found the revolving fund method of equity financing works well when tied to good capital budgeting and planning procedures."

CF Industries, Inc., Member Investment Plan Based on Assets Employed¹

CF Industries is an interregional fertilizer supply cooperative owned by 18 regional farmer cooperatives that have a major presence in American agribusiness. Combined, they do business in 40 States and two Canadian Provinces.

CF is involved with fertilizer products from the raw material stage through manufacturing, transportation, and distribution. CF's sales during calendar year 1979 exceeded \$1 billion, with assets of more than \$1 billion. Ten years ago, sales were \$113 million; and assets, \$132 million.

CF's equity is composed of common stock, patronage preferred stock, and retained earnings. Each member holds one share of voting common stock. Holdings of patronage preferred stock are based partially on prior patronage transactions with the cooperative and partially on equalization through CF's Member Investment Plan. Patronage preferred stock represents 80 percent of members' equity investment in the cooperative. Retained earnings representing a tax-paid permanent source of capital constitute the remaining 20 percent.

CF competes in a very capital-intensive, cyclical industry. Earnings can and do fluctuate. Since 1969, CF's investment in property, plant, and equipment, before accumulated depreciation, has increased by more than \$800 million, and investment in working capital has increased fourfold. During the same period, CF raised more than \$600 million in capital through various forms of debt financing. Cooperatives with significant investments in long-term assets must accumulate adequate and stable equity investment from members.

This equity is required to obtain necessary debt financing while maintaining a cushion of equity to withstand business cycles and avoid excessive financial leverage. Once the need for equity is accepted, a cooperative must maintain the equity in a manner that is fair to its members. In response to this need for equitable maintenance of a stable equity base, CF's Member Investment Plan was created.

Determining Patron Use

Member patronage refunds are determined annually based on the margins of the individual products they purchase throughout the year. The patronage refund is expressed as a dollar rate per ton of product. Each member's aggregate patronage refunds for a year therefore are determined by applying per-ton refund rates to the tonnage of each product purchased. The composition of various members' products purchased can change periodically for a variety of reasons. Changes in members' markets, products, and growth all translate into a changing composition of member products purchased. As a result, some members' shares of "product take" may be rising, while other members' shares may be declining.

To keep each member's investment in the cooperative proportionate to use of the cooperative, it becomes necessary to adjust the investment to represent that use fairly. If this were not done, some members would be overinvested and, in effect, be subsidizing the underinvested. There are many ways to estimate use of a company, including dollar value of business transacted, units of business transacted, assets employed, and the patronage-refund basis, that is, how much patronage refund is or has been received by each member.

In the past, CF used the patronage basis to determine each member's required proportionate investment in the cooperative's equity base. Under certain circumstances, however, the patronage basis may represent a conceptual error. For example, products that have little or no net margins associated with their sale distort the true usage of the company's assets. If a member purchased relatively more low-margin products than high-margin products, that member's usage on a patronage-refund basis could be significantly lower than the proportion of corporate assets employed in producing the low-margin products. The result would be an inequity, because the members who purchase low-margin products would, in effect, be subsidized by the members who purchase high-margin products.

In the case of CF, such an inequity did exist. To measure usage in a more appropriate manner, CF adopted an "assets employed" concept for their member investment plan.

"Assets Employed" Concept

CF's member investment plan can be illustrated by a hypothetical three-

member cooperative that manufactures and distributes two products in which member B receives 50 percent of the patronage refund, while members A and C receive only 25 percent each. Member A, however, uses 50 percent of the company's assets, compared with 25 percent for members B and C. Member A, in this example, is purchasing low-margin products with little or no patronage refunds. If equity investment were on a patronage-refund basis, member A would invest 25 percent of the equity while using 50 percent of the assets. Conversely, member B would invest 50 percent of the equity while using 25 percent of the assets. The assets-employed basis was found for CF to be more equitable, because it relates equity to the usage of assets. Assets employed includes all assets used either directly or indirectly in producing and distributing products to members.

A member's required investment in the cooperative is based on the proportion of assets employed to supply products to each member. The assets-employed rate for each product is computed by dividing the total book value of all assets employed in producing a given product by the total volume of that product. For example, assume that 40 tons of each of two products were produced. There were \$100 of assets associated with the production and distribution of product number 1 and \$140 associated with the production and distribution of product number 2. This translates into per-ton, assets-employed rates of \$2.50 for product number 1 and \$3.50 for product number 2. Member A took 20 tons of each product, and on the basis of the rates, used assets of \$50 for product number 1 and \$70 for product number 2. Member A, therefore, used \$120 of a total \$240 of assets.

In actual practice, CF has some 13 different patronage refund product categories. This same technique is followed in allocating the assets employed to manufacture each product for 18 member cooperatives. Each member's share of assets employed is recalculated each year based on a 5-year average. Members' total investment in CF's equity is called the member investment base. It is defined as the total of patronage preferred stock and retained earnings (excluding retained earnings from non-member business).

The computation of the required investment for each member simply prorates the member investment base of 100 to each individual member based on total assets employed. In this example, members A, B, and C have 50, 30, and 20 percent, respectively, of assets employed. The member investment base is \$100 for the company as a whole, composed of \$75 of preferred stock and \$25 of retained earnings. Based on the relative percentages of assets employed, the required investments for members A, B, and C are \$50, \$30 and \$20, respectively.

Table B-1 compares the actual investment with the investment required of each member. Member A turns out to be underinvested by \$10. Member B is overinvested by \$8, and member C is overinvested by \$2. The total amount of equity invested in the cooperative remains unchanged.

Table B-1—Actual versus required investment of members A, B, and C and their investment equalization

Item	Member			
	A	B	C	Total
<i>Dollars</i>				
Actual investment:				
Preferred stock	30	30	15	75
Retained earnings ¹	10	8	7	25
Total base	40	38	22	100
Required investment	50	30	20	100
Over- (under-) investment	(10)	+8	+2	0
Investment equalization:				
Investment (redemption) made ²	5	(4)	(1)	0
Preferred stock after equalization	35	26	14	75

¹ These are allocated on a pro forma basis only for purposes of calculating the member investment plan.

² Limited to the greater of 20 percent of member's underinvestment or 50 percent of its cash patronage refund.

Equalization of Equity

Equalization of equity takes place under the plan by having the underinvested members purchase preferred stock from the overinvested members subject to one of two constraints or "cash limitations."

The cash limitations restrict the annual equalization investment of each underinvested member to the greater of 20 percent of such member's underinvestment, and 50 percent of such member's cash patronage refund distribution for the year. These constraints were included in the plan to minimize the financial burden that could be imposed on underinvested members during years of wide variations in equalization. If a member's underinvestment is less than 50 percent of the cooperative's patronage refund distribution, the entire underinvestment must be eliminated.

As shown in table B-1, member A is underinvested by \$10 and has received a cash patronage refund of \$10. Member A's required investment would be limited to \$5 (50 percent of its cash patronage refund), which is greater than \$2 (20 percent of its underinvestment).

Member A's \$5 investment is used to redeem preferred stock of members B and C. Of the \$5, member B receives \$4 and member C receives \$1, proportionate to the amount of their overinvestments. After these transactions, member A remains underinvested by \$5, while members B and

C are overinvested by \$4 and \$1, respectively. The remaining over- or underinvestment position of each member is not adjusted—it is carried forward to the next year.

Table B-1 also illustrates the effect of equity equalization on the members' investment in preferred stock. Total preferred stock of \$75 remains unchanged. Member A began with \$30 and invested an additional \$5 by purchasing \$4 from member B and \$1 from member C.

Because CF competes in a highly capital-intensive, cyclical industry, its base capital plan may differ from those of other cooperatives. Its plan does not retire equity as some cooperatives do. Instead, the total equity investment revolves among members, based on the amount of assets they use through their product demands. The equity adjustments take place between overinvested and underinvested members, with CF coordinating the transfers among them. CF's equity is not changed in this process. Because CF's capital needs are expanding, its equity base will have to grow as the cooperative grows and its assets increase.

Indiana Farm Bureau Cooperative Association Base Capital Plan for Member Cooperatives

Indiana Farm Bureau Cooperative Association (IFCBA), a federated cooperative, has tailored a base capital plan to provide a flexible equity redemption and cash refund program for voluntary adoption by its 71 members. Members' volume of business with farmers averages about two-thirds marketing grain and one-third farm supplies. In the plan, the equity to be redeemed and the level of cash patronage refunds are linked to each member's investment and corresponding share of total patronage.

IFBCA decided to develop a plan to change the perception of the value of cooperative equities held by farmer-members, managers, and employees. IFBCA's management reasoned that farmer-members making greater use of their cooperative should expect to provide greater financial support and that those who cease using the cooperative because of death, relocation, or termination of their farming operation should have their equities redeemed.

Objectives of the New Program

IFBCA therefore adopted four objectives for a new program:

1. Accelerate transfer of ownership from overinvested members to current patrons in proportion to their volume of business with the cooperative.
2. Provide higher cash patronage refunds to patrons whose investment approaches their share of needed equity.
3. Provide for a financially strong cooperative.

4. Provide flexibility for meeting a wide range of conditions over the long run among local member associations.

Equity Redemption and Cash Refund Program

Major features of the program IFBCA developed for its member associations include:

- 1. Equity redemption and level of cash patronage refunds are tied to the ratio of each member's investment to the share of needed equity.
- 2. A member's fair share of investment is equal to the member's share of total cooperative volume of business during the selected base period multiplied by the cooperative's needed equity for the coming year.
- 3. Each year, the board determines the level of needed equity for the coming year, the base period (from 3 to 6 years), and the level of cash patronage refunds for selected percentage ranges of needed equity.
- 4. After cash patronage refunds are calculated, total equity is compared with needed equity. Any surplus equity is used to redeem overinvested equity.

An Example—Modified data from Jackson-Jennings Farm Bureau Cooperative of Seymour, Ind., the second IFBCA member cooperative to complete a cycle under the program, illustrate the basic concepts. The cooperative's board determined the net worth needed for the coming year to be \$4.65 million. Jackson-Jennings' net worth included \$390,000 preferred stock, \$10,000 voting stock, and \$600,000 unallocated reserves. The balance was in allocated equity credits. In this case, \$3.65 million in equity credits was needed to achieve the \$4.65 million net worth.

At the beginning of the fiscal year, equity credits amounted to \$3.5 million. An additional \$365,000 was available for allocation to members from 1979 net savings. The combined total of \$3.87 million exceeded needed equity credits by \$215,000.

Jackson-Jennings' board decided that the schedule of cash patronage refunds for the current year would be:

<i>Percentage of needed equity held by member</i>	<i>Percentage of patronage refunds to be paid in cash</i>
less than 50	25
50 to 100	30
more than 100.....	35

Cash patronage refunds under this schedule required \$100,000. An additional \$45,000 was designated to settle estates and \$20,000 to settle small accounts (equity credits of former patrons less than \$10). The remaining

\$50,000 was used to redeem 5 percent of the \$1 million overinvested equity.

It is unlikely that all overinvested equity can be redeemed in any year, because some members will be underinvested and the cooperative occasionally may have a poor operating year. The procedure followed by Jackson-Jennings is to first pay cash patronage and then redeem estates and small accounts. The \$50,000 remaining for redemption of excess equity was only 5 percent of the \$1 million overinvested equity.

Program Development—Revising equity programs takes time, especially when the programs are used by several cooperatives. After the conceptual framework is in place, the financial, tax, and legal consequences must be carefully evaluated. The idea for IFBCA's program germinated in 1972. IRS approval was considered advisable because of the number of cooperatives involved. Initial approval was received in 1977.

IFBCA believes it will take 6 to 10 years to make the program fully operational among all member cooperatives that wish to adopt it. IFBCA is expecting one association per month to adopt the program, because it takes staff and computer time to implement. Thus far, the plan is on target with 23 of 71 associations having adopted it.

IFBCA explained progress and development of the program to member associations at a meeting for all directors and managers in 1975. Then, as IRS approval seemed imminent, IFBCA promoted the program at regional meetings for board members.

IFBCA provides considerable support for the program. Professional staff and visual and written materials are available. Computer printouts can be prepared to show the impact of different options on the cooperative and its members. Extensive education is needed, because this base capital concept is new to most members and the several options make the program seem complex at first.

The plan allows the board considerable discretion. For example, the board establishes the needed equity for the coming year, the base period, number of brackets and the level of cash patronage refunds for each bracket, and amount of overinvested equity to be redeemed. It may also designate priority among classes of members for redemption of overinvested equity, such as estates or inactive patrons with total equity below a given amount, say \$10.

IFBCA members adopting this program convert their retained allocated equities, traditionally issued as common stock, to equity credits. This change avoids the cumbersome effort required when issuing and redeeming stock certificates and handling partial shares.

It will take several years for a cooperative to retire the equity of inactive patrons and have current patrons providing the equity in relation to

their patronage. Level of future net savings, equity needs, and amount of equity inactive members hold will determine how rapidly the cooperative can adjust investment to patronage.

Jackson-Jennings' Experience—The sequence of events leading to the program's adoption at Jackson-Jennings cooperative is typical:

1. 1975 Management attended IFBCA's mass meeting for local cooperatives on the topic.
2. 1975-77 Local management and IFBCA personnel explained the program on several occasions to the board and to three young farmer groups.
3. 1978 Plan officially adopted by the membership at a special meeting in June and became operational at the beginning of the fiscal year in September.
4. 1979 Common stock converted to equity credits and nonfarmer and inactive equityholders purged from membership list in the winter and spring.
5. 1980 Board established level of cash refunds and decided to redeem all equity credits of inactive members less than \$10, or 5 percent of overinvested equity.

This program could have confused the board and frustrated members because of the variety of options and new concepts. However, the thorough and unhurried educational program prevented these problems. Art Darlage, manager of Jackson-Jennings, declared that "members are more willing to finance the cooperative if they understand the principles of cooperative finance and the program of their cooperative. Full disclosure of plans, sources and uses of funds, equity redemption, and taxes (is essential)..."

Management emphasized key elements in:

1. One-page summaries of the program accompanying invitations to meetings on the topic.
2. Brief presentations at meetings.
3. Liberal use of overhead projections and brochures at meetings.
4. Patience in their approach, taking care not to rush or push approval of the program.
5. Readily available data for answering members' questions on how the program would affect them.
6. Thoroughly educating the board, influential members, management,

and employees in contact with members about the program.

Evaluation—IFCBA's program has a number of advantages:

1. Equity redemption is based on the amount of equity a member has in excess of patronage share.
2. More fully invested members are rewarded with higher cash patronage refunds.
3. It is adaptable to a wide range of situations, from cooperatives facing expansion to those in mature market areas.
4. It creates a positive climate for financial planning.
5. Conversion of common stock to equity credits helps eliminate the false idea that such investments yield dividends and appreciate like common stock in a noncooperative corporation.
6. Member acceptance and support apparently have been excellent.
7. Reaction of creditors and suppliers has been positive.

The financing obligation must be transferred from over- to underinvested members to achieve the program's objectives. The board's decisions continually must support these objectives. For example, a shift to high cash patronage refunds would hamper the transfer.

The 5-percent redemption of overinvested equity credits by Jackson-Jennings in its first year under the program was disappointing. This rate should be increased substantially, as experience is gained and small accounts are paid off. Further, as the rate of redemption of overinvested equity increases, the financial burden of handling estates will be reduced.

Darlage said that "I would do it (adopt the program) again and implement it in the same way. It is a fair way to redeem equity and provides a tremendous opportunity to explain cooperative principles and ownership. This program has also taken a big load off of our office (by reducing the number of equity accounts)."

Several member cooperatives adopting the program shortened their membership roster from 8,000 to 3,000 by redeeming small equity accounts of inactive patrons. This action also complies with Banks for Cooperatives' credit and tax regulations.

Management of both IFBCA and Jackson-Jennings strongly endorse the program. Both emphasize that adopting this program does not solve any basic economic problem. It does, however, place management and the board in an environment where thorough financial planning is essential and difficult to avoid. As Darlage said, "It forces us to do a better job of financial planning. Equity redemption is explicitly recognized along with term debt, growth, and the impact of inflation."

Union Equity Cooperative Exchange Variable Cash Patronage Refund Plan

Union Equity Cooperative Exchange, a federated grain cooperative, adopted a variable cash patronage refund program in 1975. The plan's purpose is to adjust member investments based on volume of grain marketed through the federated cooperative. This plan is an alternative to equity redemption.

Under this plan, the cash portion of patronage refunds is determined by the member cooperative's share of ownership in the federated cooperative, compared with the member's patronage share. A fully invested cooperative receives a larger proportion of its patronage refund in cash than an underinvested member cooperative.

A member's share of the total grain sold to Union Equity by all members over the most recent 10-year period is used to establish a member's patronage share. The level of members' equity needed to support current operations and planned expansion is determined yearly. This projected equity base is increased to reflect demands for facilities and operating funds. After a member cooperative has an equity investment equal to its share of the federated's projected equity base, all patronage refunds will be paid in cash.

Four levels of cash refunds have been established:

20 percent for new members who are earning their first share of stock,

40 percent until a member's share of equity is equal to the member's 10-year average share of business volume,

60 percent when a member's share of equity is equal to or greater than the member's 10-year average share of business volume,

100 percent when a member's equity is equal to or greater than its share of the projected equity base.

Union Equity's policy has been to return about 60 percent of patronage refunds in cash. The cash refund levels are designed to continue this overall level of cash refunds. In 1979, 54 percent of patronage refunds were in cash.

Union Equity retires only the equity of cooperatives no longer eligible for membership. Therefore, all adjustments between share of investment and share of patronage are made by the different levels of cash refunds. Figure B-1 shows the adjustment made in the balances of two members' share of equity and patronage. Cooperative A was substantially overinvested at the beginning of the program in 1975. Its percent of ownership was twice as large as its percent of patronage over the past 10 years. It received all patronage refunds in cash. As the equity requirement grew

and cooperative A's volume of grain changed, its equity and patronage became more in balance.

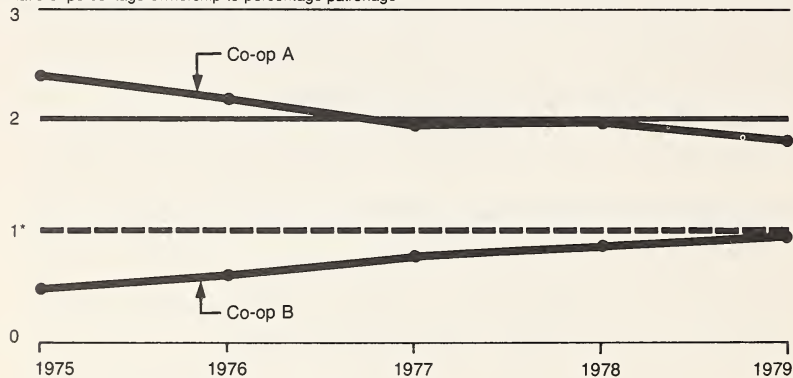
Cooperative B is a newer member and was underinvested at the beginning of the program. Forty percent of this cooperative's patronage refund was paid in cash, and the other 60 percent was added to its investment. By 1979, cooperative B's share of current equity was almost equal to its share of grain marketed through the federated.

Because the patronage share is based on 10 years of grain sales, further adjustments will take place. The figure shows that the relationship of investment and patronage of cooperatives A and B are being brought closer together by the plan, which has worked well for Union Equity. It was adopted with minimum changes in existing policies.

Figure B-1

Ratio of Share of Ownership to Share of Patronage for Two Members for the First Five Years of a Variable Cash Patronage Refund Plan

Ratio of percentage ownership to percentage patronage



*Share of ownership equals share of patronage.

Tri-Valley Growers' Base Capital Plan with Equity Trading Between Members²

Tri-Valley is a major cooperative that cans and markets 10 commodities produced by nearly 500 member farms throughout California's San Joaquin and Sacramento valleys and in the northern coastal areas of the State. The cooperative was formed in 1963, when Tri-Valley Packing Association merged with Turlock Cooperative Growers. Both began cooperative canning operations in the early 1930's. Tri-Valley's marketing volume has grown significantly since the merger. Much of this growth reflects expanding patronage by the original members; the membership roles have changed very little throughout the years.

All commodities enter an annual pool from which proceeds are distributed to each member in proportion to the value of deliveries (based on the prevailing commodity prices.)

The cooperative requires a large amount of capital because it: (1) uses high volume, largely mechanized packing operations; (2) warehouses seasonally manufactured products to supply year-round sales; (3) has been modernizing its plant and consolidating its operations during the past decade; and (4) is vertically integrated.

The extent of these capital demands wasn't foreseen when Tri-Valley's base capital program was launched in 1965. Managers also were caught unawares by the amount of capital needed to meet the demands of the 1970s' rampant inflation.

It was clear 15 years ago that Tri-Valley is a capital-intensive business that requires a reliable equity capital base. Its history of variable rates of annual equity retains—within a yearly limit—indicated that a base capital method would distribute equity more equitably than a revolving fund. Finally, much of the membership was exposed to unusual personal tax burdens, because future taxable income would be "doubled up" with revolved equity from per-unit retains on which no tax had been paid before 1962.

Description of Plan

Tri-Valley's base capital program kept many of the revolving fund's principal features. Rates of annual retains still are determined by the board of directors and still are limited to a maximum of 17 1/2 percent of established commercial value in any year. Directors annually establish members' equity requirements as a percentage of the most recent 8-year average of the value of crops delivered. The directors can vary this but have maintained it at 140 percent, which is 8 years times the 17 1/2 percent maximum annual equity retain rate.

If a member's patronage in each of 8 successive years is \$10,000, the equity requirement would be \$14,000. If this amount is fully invested and

patronage continues at \$10,000 annually, the member is subject to no retains and no equity refunds with each subsequent pool closing.

In any year in which the patronage value changed the 8-year average, the member's equity requirement would correspondingly increase or decrease. If the member withdraws, the equity is refunded at an annual rate of \$1,750 over an 8-year period.

Market for Equity

Since starting this base capital equity program in the mid-60's, Tri-Valley has made two changes in its bylaws. In 1974, active members were allowed to purchase equity from other equityholders to meet equity investment requirements. Because Tri-Valley's annual pools are subject to equity retains of \$10 million or more, this represents a substantial annual market for anyone wanting to liquidate equity holdings.

Tri-Valley had two reasons for creating this market for its equity. One was to respond to general criticism by local lenders who tended to look on equity holdings as poor collateral because of the relatively long revolvment period and the absence of any dated obligation by the cooperative. A ready market for Tri-Valley equity has greatly enhanced its collateral value. Second, Tri-Valley provided an alternative to conventional refund cycles for withdrawing members or estates. With access to a market, they can now liquidate equity more quickly.

Members have transferred \$3 million in equity since the practice began 6 years ago. Most has been sold at 70 percent of face value. This otherwise beneficial change has had an unforeseen consequence: Active members sold their equity too readily. These sales had no direct effect, but they violated the cooperative principle that each member maintain an equity investment proportionate to patronage.

Tri-Valley responded with a second bylaw amendment that charges interest against a member's pool proceeds approximately equal to the cooperative's interest cost on an amount equal to the equity sold by the underinvested member. All members also must maintain at least 50 percent of their equity requirement.

Acceptance of Plan

Some members or their accountants didn't understand the new plan. While the old plan dealt in specific amounts retained each year and revolved in order, the plan may now result in a refund one year, a retain the next. This was a radical and confusing change for many, and turned a tax benefit into a member relations problem.

Some commercial banks, where managerial changes are frequent, are still confused about the equity sales options. Also, less financially sophisticated members don't easily understand the present-value basis for decid-

ing to buy or sell equity. They suspect that such transactions might be harder to make and that sales at discounted rates lower the dollar-for-dollar value of equity investments.

Another source of confusion is the variety of equity programs used by other California cooperatives. The State has a broadly diversified agriculture; a single grower may belong to a number of cooperatives, each marketing one of his or her crops, each with a different equity program.

To counter these communications problems, Tri-Valley is developing a fact sheet on its equity program and is meeting annually with lenders to review its operation and discuss the equity program.

To briefly summarize the main features of Tri-Valley's base capital equity program:

1. The equity retirement is determined annually by the board of directors as a percentage of the most recent 8-year average value of membership patronage.
2. Members' equity investments are made either through purchases from other equityholders or through annual retains.
3. Whenever a member's equity balance exceeds the equity requirement, the surplus is subject to refund. The board of directors may refund this in cash or as an interest-bearing note of not more than 3 years' duration. The board may also defer refunding indefinitely.
4. Any equity holder may sell to an active member. Active members must maintain an equity investment equal to at least 50 percent of their equity requirement. Any deficit in an active member's equity balance resulting from sale of equity incurs an interest charge equal to the cooperative's borrowing cost.
5. An active and continuous communications program keeps members and lenders informed.

This equity program has achieved substantial benefits for Tri-Valley. It has solved what could have been a serious tax problem for most members and provides more equitable investment than the revolving fund. And it allows members to easily liquidate their equity—a provision that strengthens the equity's value and permits economically sound cash conversions for retired members and estates.

FOOTNOTES

¹This case study is based on a paper presented by Robert C. Liuzzi, Executive Vice President, CF Industries, Inc., at the National Institute on Cooperative Education, August 12, 1980 at Pennsylvania State University.

²Condensed from William F. Allewelt, Jr., "Tri-Valley Revamps Equity Plan," *Farmer Cooperatives*, March 1980, pp. 6-7.

APPENDIX C: EXAMPLES OF BYLAW PROVISIONS FOR A BASE CAPITAL PLAN

The following two sets of bylaw provisions are those used by a few successful cooperatives. They are *not* considered models. Any cooperative considering a base capital plan may wish to modify the provisions to fit its needs. Also, the cooperative should have its attorney check the base capital bylaw provisions for compatibility with other bylaw provisions and with the State statute under which it is incorporated.

The reader will notice that the bylaws, while establishing a base capital financing method, make reference to revolving fund certificates. If a cooperative considering these bylaws has no revolving fund certificates outstanding, then references to revolving fund certificates should be deleted.

Example 1

Section __: *Establishment of Base Capital Fund.* Beginning with the __ fiscal year, the Board of Directors shall establish a Base Capital (or Adjustable Capital) Fund as a method for active members to finance this Cooperative in proportion to their patronage or use of it. The Board shall determine annually at the beginning of the fiscal year the capital requirements of the Cooperative, which shall include the total allocated equity capital expected to be provided as Base Capital.

Such equity capital requirements shall include the approximate amount of overinvestments and underinvestments of members (and nonmembers, if applicable) to be adjusted so as to maintain member patron equity capital in proportion to use of the Cooperative.

a. *Base Capital Credits.* Each member and nonmember patron's share in the Base Capital Fund shall be evidenced by Base Capital Credits, and a record of all holders of such Credits shall be maintained by the Cooperative. Notices of Base Capital Credits to members and patrons shall only be in memorandum form and such memoranda need not be endorsed and returned to the Cooperative upon any payment thereon, or any redemption or cancellation thereof.

Such Credits shall be transferable only to the Cooperative or to an eligible member of the Cooperative on the books of the Cooperative in a manner established by the Board of Directors. Such Credits can be transferred from any member to another member provided the transfer is reported in writing.

No interest or dividend shall be paid on Base Capital Credits. All debts, both secured and unsecured, of the Cooperative shall be entitled to priority over all outstanding Base Capital Credits.

b. *Computation of Base Capital Credits.* A member or other patron's share of the Base Capital Fund shall be computed on the basis of the

average volume of products he/she marketed through the Cooperative during a number of the most recent fiscal years of the Cooperative, not exceeding ten (10), as conclusively determined by the Board of Directors to be most appropriate.¹

c. *Adjustment of Base Capital Credits.* Each member's or patron's Base Capital Credits shall be adjusted at the beginning of each fiscal year on the basis of the average volume marketed through the Cooperative (or on the basis of the average economic value of that member's/patron's products accepted by the Cooperative) during the preceding number of fiscal or crop years fixed by the Board of Directors as the applicable base period. Thus, a member or a patron's Base Capital share at any time will depend upon his/her volume of marketings through the Cooperative

d. *Composition of Base Capital.* Such capital may consist of per-unit capital retains or noncash deferred patronage refunds, or both. Such equities shall be credited to accounts of underinvested patrons, i.e., those who do not have their full share of Base Capital until they have accumulated their full shares. Such capital retains and patronage refunds may be either qualified or nonqualified. If the Base Capital Credits of any patron exceeds his or her share for any fiscal year, the excess shall be refunded to said patron in accordance with Sec. __, paragraph e.

e. *Limitations on Annual Accumulations and Redemptions of Base Capital Credits.* The Board of Directors may establish a policy as to the maximum percentage of a member's or patron's underinvestment in Base Capital that he/she shall provide in any one year. Also, the Board may establish a policy as to the maximum percentage of a member's or patron's excess (overinvestment) in Base Capital Credits that it will redeem in any one year.

f. *Qualified Per-Unit Retains and Patronage Refunds.* The Board of Directors shall determine at the beginning of each fiscal year the per-unit retain deductions to be made during the year for Revolving Fund or Base Capital purposes, or both, and shall issue qualified Base Capital Credits or Revolving Fund Credits or Certificates for such retains within the time period (currently 8-1/2 months) required by the Internal Revenue Service to permit a Federal income tax deduction by the Cooperative.

Also, the Board shall make patronage refund distributions, under preexisting obligations, to member-patrons or all patrons after the close of

¹Alternative: Each patron's Base Capital share for each fiscal year shall be that proportion which the average economic value of the products he/she marketed through the cooperative during the immediate preceding base period (not less than 5 nor more than 7 fiscal or crop years as determined by the Board) bears to the average economic value of all products marketed for all patrons during that base period.

the fiscal year, and shall issue qualified Base Capital Credits or Revolving Fund Credits or Certificates to the patrons within the prescribed time period.

g. *Nonqualified Per-Unit Retains and Patronage Refunds.* In lieu of the qualified retains covered in paragraph f, each member or patron may elect to have “handling fees” deducted by the Cooperative from all or a portion of such member’s or patron’s marketing proceeds. Such deductions shall not be considered as Federal income tax deductions by the Cooperative. In the event handling fees are elected by a member or patron, the amount shall be established at a per-unit rate which is ___ percent of the per-unit rate established by the Board for *qualified* Base Capital Credits or Revolving Fund Credits or Certificates to such member’s products.

Also the Board shall determine and issue, under proper procedures and time limits, *nonqualified* Base Capital Credits or Revolving Fund Credits or Certificates for any portion of the patronage refunds for the preceding fiscal year which it deems advisable.

h. *Records and Procedures.* Computations and determinations under this Section shall be made on the basis of the Cooperative’s accounts and records.

The Board of Directors may adopt from time to time any policies, procedures, or regulations appropriate to carry out the provisions of this Section; provided that they shall be applied uniformly to all members and patrons in like situations and in a manner which shall be equitable and consistent with cooperative methods of operation.

Example 2

Section __: *Base Capital.* The Board of Directors shall determine annually the capital requirements of the Association and shall further determine annually an equitable allocation of such requirements among members of the Association and other patrons. Such allocation is to be computed on the basis of the average volume of product, by reasonably commercial units provided by each member during any number of prior consecutive fiscal years of the Association, not exceeding ten (10), as conclusively determined by the Board of Directors to be most representative. Each member shall maintain capital accounts in accordance with such allocations. The Board of Directors shall follow reasonable standards in setting such allocations, seeking in as practicable a manner as possible, to have members’ capital accounts bear a percentage or pro-rata relationship to their overall patronage of the Association.

The Association, at the discretion of its Board of Directors, shall be entitled to continue as outstanding and not pay off any Revolving Fund Certificates in order to satisfy base capital requirements for any member or members, notwithstanding that similar Revolving Fund Certificates of

the same year or years are refunded or paid off; provided, however, that outstanding Revolving Fund Certificates which have been retained to satisfy base capital requirements shall have priority, except in dissolution, and shall be paid off and revolved, when no longer required to satisfy a member's base capital requirement, prior to the paying off and revolving of more recently issued revolving fund certificates. The Board of Directors is further empowered to prescribe other terms and conditions for the establishment and maintenance of base capital.

Section __: *Capital from Members*. All capital furnished by each member to the Association, whether in the form of capital stock, qualified per-unit retains, or nonqualified per-unit retains, will be a part of such member's base capital requirement.

a. *Qualified Per-Unit Retains*. The Board of Directors shall determine on or before November 1 of each year the per-unit retain deductions to be made during or with respect to the current season's crop for revolving fund purposes. Such capital per-unit retains fixed without reference to net earnings as so established by the Board of Directors shall be allocated and disclosed to the members and other patrons within such time or dates as provided by the Internal Revenue code and/or valid regulations issued pursuant thereto, and qualified revolving fund certificates shall be issued not later than eight and one-half (8-1/2) months after the end of each fiscal year, or within such other time as may be provided by the then current regulations of the Internal Revenue Service in order to give rise to a Federal income tax deduction by the Association pursuant to Section 1382 (b) (3) of the 1954 Code.

b. *Nonqualified Per-Unit Retains*. In lieu of the per-unit retain deductions established pursuant to paragraph (a) of this Section, each member may elect to have "handling fees" deductions retained by the Association from all or a portion of such member's crop proceeds.

The term "handling fees" as used herein shall be deemed to mean deductions retained by the Association during or with respect to the member's current season's crop, which sums will not give rise to a Federal income tax deduction by the Association pursuant to Section 1382 (b) (3) of the 1954 Internal Revenue Code, but which will be handled pursuant to Section 1382 (b) (4) of the 1954 Code.

In the event handling fees are elected by a member, the amount thereof shall be established at a per-unit rate which is *double* the per-unit rate established by the Board of Directors for qualified revolving fund certificates pursuant to paragraph (a) hereof and the Association shall issue to such member a nonqualified revolving fund certificate evidencing credit to such member's capital amount in an amount equal to fifty percent (50%) of the handling fees deducted from such member's crop.

APPENDIX D: FINANCIAL FORMULAS

Table D-1—Formulas for determining percentage allocated equity redeemed, length of revolving period, percentage cash patronage refunds, rate of growth in allocated equity, and rate of return of allocated equity necessary for programs consisting of qualified patronage refund allocations

Value	Revolving fund plan	
	All plans	No growth
Percentage allocated equity redeemed, given other values	(1a) $P = (I - c)r - g$	(1b) $P = (I - c)r$
Length of revolving period, given other values	Not applicable.	(2a) $t = -\log(I - g)/(I - c)r / \log(I + g)$ for $(I - c)r > g$ (2b) $t = I/(I - c)r$
Percentage cash patronage refunds, given other values	(3a) $c = I - (P + g)/r$	(3b) $c = I - g/(I - (I + g)^{-t})r$ (3c) $c = I - I/rt$
Rate of growth in allocated equity, given other values	(4) $g = (I - c)r - P$	Must be determined by method of successive approximation. Not applicable.
Rate of return to allocated equity necessary, given other values	(5a) $r = (P + g)/(I - c)$	(5b) $r = g/(I - c)(I - (I + g)^{-t})$ (5c) $r = I/(I - c)t$

Key to symbols:

P Percentage allocated equity redeemed.

c Percentage of patronage refunds paid in cash.

r Rate of return to allocated equity.

g Rate of growth in allocated equity.

t Length of revolving period.

Source: Royer.

Table D-2—Formulas for determining percentage allocated equity redeemed, length of revolving period, percentage cash patronage refunds, rate of growth in allocated equity, and rate of return to allocated equity necessary for programs consisting of nonqualified patronage refund allocations

Value	Revolving fund plan	
	All plans	No growth
Percentage allocated equity ¹ redeemed, given other values	(6a) $P = (I - t_c)r - g$	(6b) $P = (I - t_c)r$
Length of revolving period, given other values	Not applicable.	(7a) $t = -\log(I - g/(I - t_c)r)/\log(I + g)$ for $(I - t_c)r > g$
Rate of growth in allocated equity, given other values	(8) $g = (I - t_c)r - P$	(7b) $t = I/(I - t_c)r$
Rate of return to allocated equity ² necessary, given other values	(9a) $r = (P + g)/(I - t_c)$	(9b) $r = g/(I - t_c)(I - (I + g)^{-t})$
		(9c) $r = I(I - t_c)t$

¹ Total allocated equity (including income taxes paid on nonqualified allocations (E(a))).

² Allocated equity net of income taxes paid on nonqualified allocations (E(n)).

Key to symbols:

P Percentage allocated equity redeemed.
 t_c Cooperative average income tax rate.
r Rate of return to allocated equity.

g Rate of growth in allocated equity.

t Length of revolving period.

Source: Royer.

Table D-3—Formulas for determining percentage allocated equity redeemed, length of revolving period, rate of growth in allocated equity, and rate of deduction of per-unit capital retains necessary for programs consisting of qualified per-unit capital retains

Value	Revolving fund plan	
	All plans	No growth
Percentage allocated equity redeemed, given other values	(10a) $P = d - g$	(10c) $P = d$
Length of revolving period, given other values	Not applicable.	(11a) $t = -\log(l - g/d) / \log(l + g)$ for $d > g$ (11b) $t = l/d$
Rate of growth in allocated equity, given other values	(12) $g = d - P$	Must be determined by method of successive approximation. Not applicable.
Rate of deduction necessary, given other values	(13a) $d = P + g$	(13b) $d = g / (l - (l + g)^{-t})$ (13c) $d = l/t$

Key to symbols:

- P Percentage allocated equity redeemed.
- d Rate of deduction of per-unit capital retains.
- g Rate of growth in allocated equity.
- t Length of revolving period.

Source: Royer.

Table D-4—Formulas for determining percentage allocated equity redeemed, length of revolving period, rate of growth in allocated equity, and rate of deduction of per-unit capital retains necessary for programs consisting of nonqualified per-unit capital retains

Value	Revolving fund plan		
	All plans	Growth	No growth
Percentage allocated equity ¹ redeemed, given other values	(14a) $P = (I - t_c)d - g$		(14b) $P = (I - t_c)d$
Length of revolving period, given other values	Not applicable.	(15a) $t = -\log(I - g/(I - t_c)d)/\log(I + g)$ for $(I - t_c)d > g$	(15b) $t = I/(I - t_c)d$
Rate of growth in allocated equity, given other values	(16) $g = (I - t_c)d - P$	Must be determined by method of successive approximation.	Not applicable.
Rate of deduction of per-unit capital retains ² necessary, given other values . .	(17a) $d = (P + g)/(I - t_c)$	(17b) $d = g/(I - t_c)(I - (I + g)^{-t})$	(17c) $d = 1/(I - t_c)t$

¹ Total allocated equity (including income taxes paid on nonqualified allocations (E(a))).

² Based on allocated equity net of income taxes paid on nonqualified allocations (E(n)).

Key to symbols:

P Percentage of allocated equity (E(a)) redeemed.

t_c Cooperative average income tax rate.

d Rate of deduction of per-unit capital retains.

g Rate of growth in allocated equity.

t Length of revolving fund.

Source: Royer.

Table D-5—Formulas for determining percentage allocated equity redeemed, length of revolving period, percentage cash patronage refunds, rate of growth in allocated equity, and rate of return to retained equity, and rate of deduction of per-unit capital retains necessary for programs consisting of qualified patronage refund allocations and per-unit capital retains

Value	Revolving fund plan	
	All plans	No growth
Percentage allocated equity redeemed, given other values	(18a) $P = (l - c)r + d - g$	(18b) $P = (l - c)r + d$
Length of revolving period, given other values	Not applicable.	(19a) $t = -\log(l - g)/[(l - c)r + d]/\log(l + g)$ for $(l - c)r + d > g$
Percentage cash patronage refunds, given other values	(20a) $c = l - (P + g - d)/r$	(20b) $c = l - (g/(l - (l + g)^{-t}) - d)/r$ (20c) $c = l - (l + dt)/rt$
Rate of growth in allocated equity, given other values	(21) $g = (l - c)r + d - P$	Must be determined by method of successive approximation.
Rate of return to allocated equity necessary, given other values	(22a) $r = (P + g - d)/(l - c)$	(22b) $r = (g/(l - (l + g)^{-t}) - d)/(l - c)$ (22c) $r = (l - dt)/(l - c)t$
Rate of deduction of capital retains necessary, given other values	(23a) $d = P + g - (l - c)r$	(23b) $d = g/(l - (l + g)^{-t}) - (l - c)r$ (23c) $d = l/t - (l - c)r$

Key to symbols:

P Percentage of allocated equity redeemed.
c Percentage of cash patronage refunds.

r Rate of return to allocated equity.
d Rate of deduction of per-unit capital retains.

g Rate of growth in allocated equity.
t Length of revolving period.

Source: Royer.

Table D-6—Formulas for determining length of revolving period, percentage cash patronage refunds, rate of growth in allocated equity, and rate of return to allocated equity necessary for revolving fund and special programs consisting of qualified patronage refund allocations

Length of revolving period,
given other values(24) $t = \frac{\log(l - (p + g)/(l - c))}{(\log(l - p) - \log(l + g))}$

Percentage cash patronage re-
funds, given other values(25) $c = l - (p + g)/(l - (l - p)^t)(l + g)^{-t}r$

Rate of return to allocated eq-
uity necessary, given other
values.(26) $r = (p + g)/(l - c)(l - (l - p)^t)(l + g)^{-t})$

Key to symbols:

- t Length of revolving period.
- p Percentage of allocated equity redeemed through special program.
- g Rate of growth in allocated equity.
- c Percentage cash patronage refunds.
- r Rate of return to allocated equity.

Source: Royer.

Table D-7—Formulas for present value to patrons after taxes of alternative methods of distributing net savings and per-unit capital retains

Method	Present value to patrons after tax
Net savings distributed as a combination of cash and non-cash qualified patronage refund allocations (Method A)	(27) $PV = [c + (1 - c)/(1 + i)^t - t_p] PR$
Net savings distributed as a combination of 100 percent cash patronage refunds and additions to unallocated reserves (Method B)	(28) $PV = (1 - t_p) [(1 - (1 + t_c/(1 - t_c))g/r) NS$
Net savings distributed as non-qualified patronage refund allocations (Method C)	(29) $PV = [(1 - t_p)/(1 + i)^t] PR$
Per-unit capital retains allocated in qualified form (Method D)	(30) $PV = [(1/(1 + i)^t - t_p] CR$
Per-unit capital retains allocated in nonqualified form (Method E)	(31) $PV = [(1 - t_p)/(1 + i)^t] CR$

Key to symbols:

- PV After-tax present value to patrons of distribution.
- c Percentage of patronage refunds paid in cash.
- i Patron discount rate.
- t Length of revolving period.
- t_p Patron marginal income tax rate.
- PR Patronage refunds.
- t_c Cooperative average income tax rate.
- g Rate of growth in unallocated reserves.
- r Rate of return to unallocated reserves.
- NS Net savings available for allocation as patronage refunds.
- CR Per-unit capital retain deductions.

Source: Royer.

U.S. Department of Agriculture Agricultural Cooperative Service

Agricultural Cooperative Service provides research, management, and educational assistance to cooperatives to strengthen the economic position of farmers and other rural residents. It works directly with cooperative leaders and Federal and State agencies to improve organization, leadership, and operation of cooperatives and to give guidance to further development.

The agency (1) helps farmers and other rural residents obtain supplies and services at lower costs and to get better prices for products they sell; (2) advises rural residents on developing existing resources through cooperative action to enhance rural living; (3) helps cooperatives improve services and operating efficiency; (4) informs members, directors, employees, and the public on how cooperatives work and benefit their members and their communities; and (5) encourages international cooperative programs.

The agency publishes research and educational materials, and issues *Farmer Cooperatives*. All programs and activities are conducted on a nondiscriminatory basis, without regard to race, creed, color, sex, or national origin.